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		DB=PGPB,USPT,EPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=ADJ	
☐	L2	(Galectin-3 or Gal-3 or Mac-2 or carbohydrate adj binding adj protein-35) same diabet$	3
☐	L1	Galectin-3 or Gal-3 or Mac-2 or carbohydrate adj binding adj protein-35 same diabet$	334

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 3 of 3 returned.

1. Document ID: US 20020076738 A1

Using default format because multiple data bases are involved.

L2: Entry 1 of 3 File: PGPB Jun 20, 2002

PGPUB-DOCUMENT-NUMBER: 20020076738
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020076738 A1

TITLE: Method and kit for predicting cancer

PUBLICATION-DATE: June 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Woo, Hee Jong	Kyonggi-Do		KR	

US-CL-CURRENT: 435/7.23; 435/7.92

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

2. Document ID: US 5766856 A

L2: Entry 2 of 3 File: USPT Jun 16, 1998

US-PAT-NO: 5766856
DOCUMENT-IDENTIFIER: US 5766856 A

TITLE: Diagnostic method for evaluating advanced glycosylation endproducts using MAC-2 receptor

DATE-ISSUED: June 16, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Imani; Farhad	Woodbury	NY		
Vlassara; Helen	Shelter Island	NY		
Cerami; Anthony	Shelter Island	NY		

US-CL-CURRENT: 435/7.1; 436/811

Full | Title | Citation | Front | Review | Classification | Date | Reference | [illegible] | Claims | KWIC | Draw Desc | Image

3. Document ID: WO 9529692 A1, US 5766856 A

L2: Entry 3 of 3 File: DWPI Nov 9, 1995

DERWENT-ACC-NO: 1995-392920
DERWENT-WEEK: 200272

TITLE: Use of Mac-2 protein - for treatment, diagnosis and prognosis of disorders associated with advanced glycosylation end prods.

INVENTOR: CERAMI, A; IMANI, F ; VLASSARA, H

PRIORITY-DATA: 1994US-0234817 (April 28, 1994), 1984US-0590820 (March 19, 1984), 1985US-0798032 (November 14, 1985), 1986US-0907747 (September 12, 1986), 1987US-0091534 (September 3, 1987), 1989US-0453958 (December 20, 1989), 1991US-0749444 (August 23, 1991), 1993US-0010268 (January 28, 1993)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9529692 A1	November 9, 1995	E	051	A61K038/17
US 5766856 A	June 16, 1998		000	G01N033/53

INT-CL (IPC): A61 K 38/17; G01 N 33/53; G01 N 33/68

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Term	Documents
GALECTIN-3	122
GALECTIN-3S	0
GAL-3	14
GAL-3S	3
MAC-2	223
MAC-2S	0
CARBOHYDRATE	51809
CARBOHYDRATES	44045
BINDING	325250
BINDINGS	8249
((GALECTIN-3 OR GAL-3 OR MAC-2 OR CARBOHYDRATE ADJ BINDING ADJ PROTEIN-35) SAME DIABET$).PGPB,USPT,EPAB,DWPI,TDBD.	3

There are more results than shown above. Click here to view the entire set.

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=> s (galectin-3 or Gal-3 or Mac-2 or carbohydrate (w) binding (w) protein-35) (s0 diabet?
MISSING OPERATOR OTEIN-35) (S0
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s ((galectin-3 or Gal-3 or Mac-2) or carbohydrate (w) binding (w) protein (w)35)) (s)
diabet?
UNMATCHED RIGHT PARENTHESIS '35)) '
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number of left parentheses.

=> s ((galectin-3 or Gal-3 or Mac-2) or carbohydrate (w) binding (w) protein-35) (s)
diabet?
L1 0 FILE ADISCTI
L2 0 FILE ADISINSIGHT
L3 0 FILE ADISNEWS
L4 0 FILE AGRICOLA
L5 0 FILE ANABSTR
L6 0 FILE AQUASCI
L7 0 FILE BIOBUSINESS
L8 0 FILE BIOCOMMERCE
L9 14 FILE BIOSIS
L10 1 FILE BIOTECHDS
L11 3 FILE BIOTECHNO
L12 0 FILE CABA
L13 2 FILE CANCERLIT

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L14          18 FILE CAPLUS
L15           0 FILE CEABA-VTB
L16           0 FILE CEN
L17           0 FILE CIN
L18           1 FILE CONFSCI
L19           0 FILE CROPB
L20           0 FILE CROPU
L21           0 FILE DISSABS
L22          16 FILE DGENE
L23           0 FILE DRUGB
L24           0 FILE DRUGMONOG
L25           0 FILE DRUGMONOG2
L26           0 FILE IMSDRUGNEWS
L27           3 FILE DRUGU
L28           0 FILE IMSRESEARCH
L29           1 FILE EMBAL
L30          13 FILE EMBASE
L31           6 FILE ESBIOBASE
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'OTEIN-35) (S) DIABET?'
L32           0 FILE FEDRIP
L33           0 FILE FOMAD
L34           0 FILE FOREGE
L35           0 FILE FROSTI
L36           0 FILE FSTA
L37           0 FILE GENBANK
L38           0 FILE HEALSAFE
L39           1 FILE IFIPAT
L40           0 FILE IMSPRODUCT
L41           0 FILE JICST-EPLUS
L42           0 FILE KOSMET
L43           1 FILE LIFESCI
L44           0 FILE MEDICONF
L45           7 FILE MEDLINE
L46           0 FILE NIOSHTIC
L47           0 FILE NTIS
L48           0 FILE NUTRACEUT
L49           0 FILE OCEAN
L50           2 FILE PASCAL
L51           0 FILE PCTGEN
L52           0 FILE PHAR
L53           0 FILE PHARMAML
L54           0 FILE PHIC
L55           1 FILE PHIN
L56           0 FILE PROMT
L57           0 FILE RDISCLOSURE
L58          18 FILE SCISEARCH
L59           0 FILE SYNTHLINE
L60           6 FILE TOXCENTER
L61           6 FILE USPATFULL
L62           0 FILE USPAT2
L63           0 FILE VETB
L64           0 FILE VETU
L65           1 FILE WPIDS
L66           0 FILE IPA
L67           0 FILE NAPRALERT
L68           0 FILE NLDB

TOTAL FOR ALL FILES
L69         121 ((GALECTIN-3 OR GAL-3 OR MAC-2) OR CARBOHYDRATE (W) BINDING (W)
                PROTEIN-35) (S) DIABET?

=> dup rem l69
DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, BIOCOMMERCE, DGENE,
DRUGMONOG, DRUGMONOG2, IMSRESEARCH, FEDRIP, FOREGE, GENBANK, IMSPRODUCT,
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L70 72 DUP REM L69 (49 DUPLICATES REMOVED)

=> d l70 1-72 ibib abs

L70 ANSWER 1 OF 72 USPATFULL on STN
ACCESSION NUMBER: 2004:13385 USPATFULL
TITLE: Proteins and nucleic acids encoding same
INVENTOR(S): Alsobrook, John P., II, Madison, CT, UNITED STATES
Anderson, David W., Branford, CT, UNITED STATES
Ballinger, Robert A., Newington, CT, UNITED STATES
Boldog, Ference L., North Haven, CT, UNITED STATES
Burgess, Catherine E., Wethersfield, CT, UNITED STATES
Casman, Stacie J., North Haven, CT, UNITED STATES
Ellerman, Karen, Branford, CT, UNITED STATES
Gangolli, Esha A., Madison, CT, UNITED STATES
Gerlach, Valerie, Branford, CT, UNITED STATES
Gilbert, Jennifer A., Madison, CT, UNITED STATES
Gorman, Linda, Branford, CT, UNITED STATES
Guo, Xiaojia (Sasha), Branford, CT, UNITED STATES
Gusev, Vladimir Y., Madison, CT, UNITED STATES
Kekuda, Ramesh, Norwalk, CT, UNITED STATES
Li, Li, Branford, CT, UNITED STATES
Liu, Xiaohong, Branford, CT, UNITED STATES
Malyankar, Uriel M., Branford, CT, UNITED STATES
Miller, Charles E., Guilford, CT, UNITED STATES
Millet, Isabelle, Milford, CT, UNITED STATES
Padigaru, Muralidhara, Branford, CT, UNITED STATES
Patturajan, Meera, Branford, CT, UNITED STATES
A. Pena, Carol E., New Haven, CT, UNITED STATES
Peyman, John A., New Haven, CT, UNITED STATES
Rastelli, Luca, Guilford, CT, UNITED STATES
Shenoy, Suresh G., Branford, CT, UNITED STATES
Shimkets, Richard A., Guilford, CT, UNITED STATES
Smithson, Glennda, Guilford, CT, UNITED STATES
Spytek, Kimberly A., New Haven, CT, UNITED STATES
Stone, David J., Guilford, CT, UNITED STATES
Taupier, Raymond J., JR., East Haven, CT, UNITED STATES
Tchernev, Velizar T., Branford, CT, UNITED STATES
Vernet, Corine A.M., Branford, CT, UNITED STATES
Zerhusen, Bryan D., Branford, CT, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004009907	A1	20040115	
APPLICATION INFO.:	US 2002-85198	A1	20020225	(10)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2001-271646P	20010226	(60)
	US 2001-276401P	20010316	(60)
	US 2001-311981P	20010813	(60)
	US 2001-312858P	20010816	(60)
	US 2001-271840P	20010227	(60)
	US 2001-277324P	20010320	(60)
	US 2001-286096P	20010424	(60)
	US 2001-299695P	20010620	(60)
	US 2001-315614P	20010829	(60)
	US 2001-272405P	20010228	(60)
	US 2001-272410P	20010228	(60)
	US 2001-272414P	20010228	(60)
	US 2001-278660P	20010320	(60)
	US 2001-280234P	20010330	(60)

	US 2001-272404P	20010228 (60)
	US 2001-280039P	20010330 (60)
	US 2001-313280P	20010817 (60)
	US 2001-322818P	20010917 (60)
	US 2001-273300P	20010302 (60)
	US 2001-280818P	20010402 (60)
	US 2001-288353P	20010503 (60)
	US 2001-294834P	20010531 (60)
	US 2001-299845P	20010621 (60)
	US 2001-272922P	20010302 (60)
	US 2001-272787P	20010302 (60)
	US 2001-285754P	20010423 (60)
	US 2001-303242P	20010705 (60)
	US 2001-273048P	20010302 (60)
	US 2001-283443P	20010412 (60)
	US 2001-291703P	20010517 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Ivor R. Elrifi, MINTZ, LEVIN, COHN, FERRIS,, GLOVSKY and POPEO, P.C., One Financial Center, Boston, MA, 02111
NUMBER OF CLAIMS: 49
EXEMPLARY CLAIM: 1
LINE COUNT: 46330
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed herein are nucleic acid sequences that encode novel polypeptides. Also disclosed are polypeptides encoded by these nucleic acid sequences, and antibodies, which immunospecifically-bind to the polypeptide, as well as derivatives, variants, mutants, or fragments of the aforementioned polypeptide, polynucleotide, or antibody. The invention further discloses therapeutic, diagnostic and research methods for diagnosis, treatment, and prevention of disorders involving any one of these novel human nucleic acids and proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L70 ANSWER 2 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:757728 CAPLUS
DOCUMENT NUMBER: 139:275232
TITLE: Human diabetes-mediating proteins with altered expression levels in islet of Langerhans cells exposed to cytokines, and uses for diagnosis, treatment and prevention of diabetes
INVENTOR(S): Larsen, Peter Mose; Fey, Stephen J.; Nerup, Jorn; Karlsen, Allan E.
PATENT ASSIGNEE(S): Syddansk Universitet, Den.
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003078456	A2	20030925	WO 2003-DK190	20030320

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ
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NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DK 2002-431 A 20020320

AB This invention relates to human diabetes-mediating proteins, methods of identifying diabetes-mediating proteins, methods for screening for drugs which affect the expression of diabetes-mediating proteins, and therapeutic compds. for the treatment and prevention of diabetes. Provided are secreted and non-secreted proteins with altered expression levels in human islet of Langerhans cells exposed to cytokines. They include protective and deleterious diabetes-mediating proteins. Also provided are the polynucleotides encoding these diabetes-mediating proteins. Drug screening methods for identifying a test compd. capable of altering the expression of a diabetes-mediating protein, and methods of preventing or ameliorating diabetes by administering a compd. capable of altering the expression of a diabetes-mediating protein are disclosed.

L70 ANSWER 3 OF 72 USPATFULL on STN

ACCESSION NUMBER: 2003:312174 USPATFULL

TITLE: Identification, monitoring and treatment of disease and characterization of biological condition using gene expression profiles

INVENTOR(S): Bevilacqua, Michael, Boulder, CO, UNITED STATES
Cheronis, John C., Conifer, CO, UNITED STATES
Tryon, Victor, Loveland, CO, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003219771	A1	20031127	
APPLICATION INFO.:	US 2002-291856	A1	20021108	(10)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2001-348213P	20011109	(60)
	US 2001-340881P	20011207	(60)
	US 2002-369633P	20020403	(60)
	US 2002-376997P	20020430	(60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: BROMBERG & SUNSTEIN LLP, 125 SUMMER STREET, BOSTON, MA, 02110-1618

NUMBER OF CLAIMS: 77

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 44 Drawing Page(s)

LINE COUNT: 4844

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Gene expression data, in particular gene expression profiles, are created and used in the identification, monitoring and treatment of disease and characterization of biological conditions. Profile data sets are derived from subject samples and include quantitative substantially repeatable measures of a distinct amount of RNA or protein constituent in a panel selected to enable evaluation of a biological condition. Such profile data sets may be used to provide an index indicative of the biological state of a subject, which may be compared to a normative value of the index determined with respect to a relevant population of subjects.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L70 ANSWER 4 OF 72 USPATFULL on STN

ACCESSION NUMBER: 2003:306854 USPATFULL

TITLE: Methods and compositions of treating and/or preventing diabetic retinopathy with pericyte apoptosis inhibitors

INVENTOR(S): Lecomte, Marc, Lissieu, FRANCE
Denis, Ulriche, Caluire et Cuire, FRANCE
Paget, Clarisse, Lyon, FRANCE

Wiernsperger, Nicolas, Orlienas, FRANCE
Lagarde, Michel, Decines, FRANCE
PATENT ASSIGNEE(S): Merck Sante, a corporation of France, Lyon, FRANCE (non-U.S. corporation)
INSERM, a corporation of France, Paris, FRANCE (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003216290	A1	20031120
APPLICATION INFO.:	US 2003-421389	A1	20030423 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 2001-FR3306, filed on 24 Oct 2001, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	FR 2000-13640	20001024

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: IP DEPARTMENT OF PIPER RUDNICK LLP, 3400 TWO LOGAN SQUARE, 18TH AND ARCH STREETS, PHILADELPHIA, PA, 19103
NUMBER OF CLAIMS: 35
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Page(s)
LINE COUNT: 2046
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of preventing or treating diabetic retinopathy is disclosed including administering to a mammal a therapeutically effective amount of an inhibitor of retinal pericyte apoptosis. Also disclosed is a pharmaceutical composition which treats and/or prevents diabetic retinopathy comprising as an active agent a therapeutically effective amount of at least one inhibitor of retinal pericyte apoptosis and a pharmaceutically acceptable carrier.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L70 ANSWER 5 OF 72 USPATFULL on STN
ACCESSION NUMBER: 2003:38351 USPATFULL
TITLE: Novel genes encoding proteins having prognostic, diagnostic, preventive, therapeutic, and other uses
INVENTOR(S): Holtzman, Douglas A., Jamaica Plain, MA, UNITED STATES
Barnes, Thomas M., Brookline, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003027998	A1	20030206
APPLICATION INFO.:	US 2001-796753	A1	20010301 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1998-183175, filed on 30 Oct 1998, ABANDONED Continuation-in-part of Ser. No. US 2000-599596, filed on 22 Jun 2000, ABANDONED Division of Ser. No. US 1998-223546, filed on 30 Dec 1998, ABANDONED Division of Ser. No. US 1999-471179, filed on 23 Dec 1999, PENDING Continuation-in-part of Ser. No. US 1998-223546, filed on 30 Dec 1998, ABANDONED Continuation-in-part of Ser. No. US 1999-474072, filed on 29 Dec 1999, PENDING Continuation-in-part of Ser. No. US 1998-224246, filed on 30 Dec 1998, ABANDONED Continuation-in-part of Ser. No. US 1999-474071, filed on 29 Dec 1999, ABANDONED Continuation-in-part of Ser. No. US 1998-223094, filed on 30 Dec 1998, ABANDONED Continuation-in-part of Ser. No. US 2000-514010, filed on 25 Feb 2000, ABANDONED Continuation-in-part of Ser. No. US 1999-259388, filed on 26 Feb 1999, ABANDONED Continuation-in-part of Ser. No. US 2000-516745, filed on 1 Mar 2000, ABANDONED

Continuation-in-part of Ser. No. US 2000-597993, filed on 19 Jun 2000, PENDING Continuation-in-part of Ser. No. US 1999-336536, filed on 18 Jun 1999, PENDING Continuation-in-part of Ser. No. US 2000-630334, filed on 31 Jul 2000, PENDING Continuation-in-part of Ser. No. US 1999-365164, filed on 30 Jul 1999, ABANDONED Continuation-in-part of Ser. No. US 2000-665666, filed on 20 Sep 2000, PENDING Continuation-in-part of Ser. No. US 1999-399723, filed on 20 Sep 1999, ABANDONED Continuation-in-part of Ser. No. US 2000-667751, filed on 21 Sep 2000, PENDING Continuation-in-part of Ser. No. US 1999-409634, filed on 30 Sep 1999, ABANDONED Continuation-in-part of Ser. No. US 2000-572002, filed on 15 May 2000, PENDING Continuation-in-part of Ser. No. US 1999-312359, filed on 14 May 1999, ABANDONED Continuation-in-part of Ser. No. US 2000-606565, filed on 29 Jun 2000, PENDING Continuation-in-part of Ser. No. US 1999-342687, filed on 29 Jun 1999, ABANDONED Continuation-in-part of Ser. No. US 2000-606317, filed on 29 Jun 2000, PENDING Continuation-in-part of Ser. No. US 1999-345464, filed on 30 Jun 1999, ABANDONED

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-122458P	19990301 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711
NUMBER OF CLAIMS: 27
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 536 Drawing Page(s)
LINE COUNT: 22222
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides isolated nucleic acid molecules and polypeptide molecules. The invention also provides antisense nucleic acid molecules, expression vectors containing the nucleic acid molecules of the invention, host cells into which the expression vectors have been introduced, and non-human transgenic animals in which a nucleic acid molecule of the invention has been introduced or disrupted. The invention still further provides isolated polypeptides, fusion polypeptides, antigenic peptides and antibodies. Diagnostic, screening and therapeutic methods utilizing compositions of the invention are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L70 ANSWER 6 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2003:940482 CAPLUS
TITLE: Mechanisms involved in the stimulatory effect of advanced glycation end products on growth of rat aortic smooth muscle cells
AUTHOR(S): Seki, N.; Hashimoto, N.; Sano, H.; Horiuchi, S.; Yagui, K.; Makino, H.; Saito, Y.
CORPORATE SOURCE: Graduate School of Medicine, Department of Clinical Cell Biology, Chiba University, Chiba, Japan
SOURCE: Metabolism, Clinical and Experimental (2003), 52(12), 1558-1563
CODEN: METAAJ; ISSN: 0026-0495
PUBLISHER: W. B. Saunders Co.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Hyperglycemia is an important cause of accelerated atherosclerosis in diabetic patients. We examd. the effect of hyperglycemia and advanced glycation end products (AGE) on proliferation of rat aortic smooth muscle

cells (SMC) in culture; in vivo, this event is believed to contribute importantly to atherogenesis in diabetes mellitus. Glucose itself dose-dependently inhibited thymidine uptake by SMC, but AGE increased thymidine uptake, suggesting that SMC proliferation is accelerated by AGE. To examine possible mechanisms for this effect, we studied nuclear factor-kappa B (NF-.kappa.B) activation and the tyrosine phosphorylation pathway; AGE stimulated NF-.kappa.B activity, but phosphorylation of the platelet-derived growth factor (PDGF) receptor was unchanged. In Chinese hamster ovary (CHO) cells overexpressing galectin-3, an AGE receptor related to atherosclerosis, AGE increased thymidine uptake. This suggests SMC proliferation is enhanced by AGE via galectin-3. As pathways involving AGE-**galectin-3** interaction thus may be involved in macroangiopathy, AGE appears to be important to the role of SMC in accelerated atherosclerosis assocd. with **diabetes** mellitus.

L70 ANSWER 7 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 2

ACCESSION NUMBER: 2003:563778 BIOSIS
DOCUMENT NUMBER: PREV200300564602
TITLE: The protective effect of aminoguanidine on erectile function in streptozotocin diabetic rats.
AUTHOR(S): Usta, Mustafa F.; Bivalacqua, Trinity J.; Yang, Dae Yul; Ramanitharan, Anshiya; Sell, David R.; Viswanathan, Ashiwini; Monnier, Vincent M.; Hellstrom, Wayne J. G. [Reprint Author]
CORPORATE SOURCE: Department of Urology, School of Medicine, Tulane University, 1430 Tulane Ave., SL-42, New Orleans, LA, 70112, USA
whellst@tulane.edu
SOURCE: Journal of Urology, (October 2003) Vol. 170, No. 4 Part 1, pp. 1437-1442. print.
CODEN: JOURAA. ISSN: 0022-5347.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Dec 2003
Last Updated on STN: 3 Dec 2003

AB Purpose: Erectile dysfunction (ED) is frequently associated with diabetes mellitus. We determined if advanced glycation end products (AGEs) are involved in ED and investigated if the selective AGE and inducible nitric oxide synthase (iNOS) inhibitor aminoguanidine (AG) could protect against the development of ED in a diabetic rat model. Materials and Methods: Harlan Sprague-Dawley rats were divided into 3 groups. The 9 nondiabetic rats in group 1 served as age matched controls. Diabetes was induced in the 9 rats in groups 2 and 3, respectively, by intraperitoneal injection of streptozocin (60 mg/kg). While group 2 was given free access to water and a standard diet, group 3 was treated with AG added to drinking water (1 gm/l daily). Two months after diabetes induction in vivo intracavernous pressure measurements were determined. Penile tissue glycation (furosine on high performance liquid chromatography), AGEs (pentosidine on high performance liquid chromatography and immunohistochemistry), AGE receptor (**galectin-3** on immunohistochemistry and Western blot) and iNOS (Western blot) levels were measured in control and **diabetic** penises. Results: Cavernous tissue furosine, pentosidine, **galectin-3** and iNOS protein levels were significantly elevated in the **diabetic** group compared with controls ($p<0.05$). On the other hand, cavernous tissue furosine, pentosidine, **galectin-3** and iNOS expression were lower in **diabetic** rats treated with AG despite an unchanged glycemia level. Diabetic rats had a significant decrease in erectile function compared with control rats ($p<0.05$), while AG treated diabetic rats showed erectile function similar to that in control animals. Conclusions: Glycation, AGEs, **galectin-3** and iNOS levels are elevated in **diabetic** rat penile tissue and significantly decreased by AG treatment. Furthermore, erectile function

was preserved in AG treated animals. The observation that AG improved glycation despite no effect on glycemia suggests that AG may improve penile collagen turnover.

L70 ANSWER 8 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2003:784705 CAPLUS
DOCUMENT NUMBER: 139:320909
TITLE: AGE-RAGE system in the development of diabetic vascular complications
AUTHOR(S): Yamamoto, Yasuhiko
CORPORATE SOURCE: Dep. Biochem. Mol. Vascular Biol., Kanazawa Univ. Grad. Sch. Med. Sci., Kanazawa, 920-8640, Japan
SOURCE: Seikagaku (2003), 75(9), 1230-1233
CODEN: SEIKAQ; ISSN: 0037-1017
PUBLISHER: Nippon Seikagakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review on the formation of advanced glycation endproducts (AGE) in **diabetic** patients, structure and distribution of receptor for AGE (RAGE), effects of AGE-RAGE system on vascular cells, involvement of AGE-RAGE system in microvascular complications in **diabetes**, other AGE receptors (scavenger receptors, OST-48, 80K-H, **galectin -3**, etc.), and novel RAGE variants.

L70 ANSWER 9 OF 72 DRUGU COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2003-17717 DRUGU P B
TITLE: Protective effect of aminoguanidine on erectile function in diabetes induced rats.
AUTHOR: Usta M F; Bivalacqua T J; Monnier V M; Sell D R; Sanabria J; Sikka S C; Hellstrom W
LOCATION: New Orleans, La.; Cleveland. Ohio, USA
SOURCE: J.Urol. (169, No. 4, Suppl., 306, 2003)
CODEN: JOURAA ISSN: 0022-5347
AVAIL. OF DOC.: No Reprint Address.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AN 2003-17717 DRUGU P B
AB The aims of this study were to determine if advanced glycation end-products (AGE) are responsible for the impairment of erectile function observed in diabetes and to investigate the protective effect of the selective AGE and inducible nitric oxide synthase (iNOS) inhibitor. p.o. aminoguanidine (AMG), on erectile function in i.p. streptozocin (STZ)-diabetic rats. AGE, AGE receptor and iNOS levels were elevated in diabetic rat penile tissue. The augmentation of erectile response to cavernosal nerve stimulation (CNS) with a selective AGE and iNOS inhibitors suggests a pathophysiologic mechanism for AGE-mediated erectile dysfunction via up-regulation of iNOS. Protective effect of AMG on erectile function provides a therapeutic avenue for diabetic erectile dysfunction. (conference abstract: Annual Meeting of the American Urological Association, Chicago, Illinois, USA, 2003).
ABEX Animals were divided into 3 groups; **diabetes** was induced in the 1st and 2nd groups by an injection of streptozocin (60 mg/kg). The 1st group of rats was given free access to water and standard diet, and the 2nd group had AMG added to the water (1 g/l); the 3rd group of non-**diabetic** rats served as age-matched controls. 2 Mth after induction of **diabetes**, an in-vivo erectile protocol was employed. Penile tissue AGE (pentosidine-HPLC and immunohistochemistry), specific AGE receptor (Galectin3, immunohistochemistry and Western Blot), iNOS and nNOS (Western Blot) were measured. **Diabetic** rats had a significant decrease in erectile function as determined by intracavernosal pressure (ICP) and total duration of erection (total ICP-AUC) after CNS when compared with control rats. However, AMG-treated **diabetic** rats had a peak ICP and total ICP similar to the control

animals. Penile tissue AGE and AGE receptor (**Galectin-3**, immunohistochemistry and Western Blot) expression levels were significantly elevated in the **diabetic** group cf. controls. While AMG had decreased iNOS levels in **diabetic** rats, it did not preserve nNOS protein expression in the same group. (E54/RSV)

L70 ANSWER 10 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 4

ACCESSION NUMBER: 2003:378828 BIOSIS
DOCUMENT NUMBER: PREV200300378828
TITLE: Role of **galectin-3** in **diabetic** nephropathy.
AUTHOR(S): Iacobini, Carla; Amadio, Lorena; Oddi, Giovana; Ricci, Carlo; Barsotti, Paola; Missori, Serena; Sorcini, Mariella; Di Mario, Umberto; Pricci, Flavia; Pugliese, Giuseppe [Reprint Author]
CORPORATE SOURCE: Dipartimento di Scienze Cliniche (Endocrinologia), Viale del Policlinico, 155-00161, Rome, Italy giuseppe.pugliese@uniroma1.it
SOURCE: Journal of the American Society of Nephrology, (August 2003) Vol. 14, No. Supplement 3, pp. S264-S270. print. CODEN: JASNEU. ISSN: 1046-6673.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Aug 2003
Last Updated on STN: 20 Aug 2003

AB The advanced glycosylation end products (AGE) participate in the pathogenesis of nephropathy and other diabetic complications through several mechanisms, including their binding to cell surface receptors. The AGE receptors include RAGE, the macrophage scavenger receptors, OST-48 (AGE-R1), 80K-H (AGE-R2), and galectin-3 (AGE-R3). Galectin-3 interacts with the beta-galactoside residues of cell surface and matrix glycoproteins via the carbohydrate recognition domain and with intracellular proteins via peptide-peptide associations mediated by its N-terminus domain. These structural properties enable galectin-3 to exert multiple functions, including the mRNA splicing activity, the control of cell cycle, the regulation of cell adhesion, the modulation of allergic reactions, and the binding of AGE. The lack of transmembrane anchor sequence or signal peptide suggests that it is associated with other AGE receptors, possibly AGE-R1 and AGE-R2, to form an AGE-receptor complex, rather than playing an independent role. In target tissues of **diabetic** vascular complications, such as the endothelium and mesangium, **galectin-3** is weakly expressed under basal conditions and is markedly upregulated by the **diabetic** milieu (and to a lesser extent by aging). **Galectin-3** -deficient mice were found to develop accelerated **diabetic** glomerulopathy versus the wild-type animals, as evidenced by the more pronounced increase in proteinuria, mesangial expansion, and matrix gene expression. This was associated with a more marked renal/glomerular AGE accumulation, suggesting that it was attributable to the lack of galectin-3 AGE-receptor function. These data indicate that **galectin-3** is upregulated under **diabetic** conditions and is operating in vivo to provide protection toward AGE-induced tissue injury, as opposed to RAGE.

L70 ANSWER 11 OF 72 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN

ACCESSION NUMBER: 2003:36903938 BIOTECHNO
TITLE: Role of **galectin-3** in **diabetic** nephropathy
AUTHOR: Iacobini C.; Amadio L.; Oddi G.; Ricci C.; Barsotti P.; Missori S.; Sorcini M.; Di Mario U.; Pricci F.; Pugliese G.
CORPORATE SOURCE: Dr. G. Pugliese, Dipto. Sci. Clin. (Endocrinologia), Viale del Policlinico, 155-00161 Rome, Italy. E-mail: giuseppe.pugliese@uniromal.it

SOURCE: Journal of the American Society of Nephrology, (01 AUG 2003), 14/SUPPL. 3 (S264-S270), 49 reference(s)
CODEN: JASNEU ISSN: 1046-6673
DOCUMENT TYPE: Journal; Conference Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2003:36903938 BIOTECHNO
AB The advanced glycosylation end products (AGE) participate in the pathogenesis of nephropathy and other **diabetic** complications through several mechanisms, including their binding to cell surface receptors. The AGE receptors include RAGE, the macrophage scavenger receptors, OST-48 (AGE-R1), 80K-H (AGE-R2), and **galectin-3** (AGE-R3). **Galectin-3** interacts with the .beta.-galactoside residues of cell surface and matrix glycoproteins via the carbohydrate recognition domain and with intracellular proteins via peptide-peptide associations mediated by its N-terminus domain. These structural properties enable **galectin-3** to exert multiple functions, including the mRNA splicing activity, the control of cell cycle, the regulation of cell adhesion, the modulation of allergic reactions, and the binding of AGE. The lack of transmembrane anchor sequence or signal peptide suggests that it is associated with other AGE receptors, possibly AGE-R1 and AGE-R2, to form an AGE-receptor complex, rather than playing an independent role. In target tissues of **diabetic** vascular complications, such as the endothelium and mesangium, **galectin-3** is weakly expressed under basal conditions and is markedly upregulated by the **diabetic** milieu (and to a lesser extent by aging). **Galectin-3**-deficient mice were found to develop accelerated **diabetic** glomerulopathy versus the wild-type animals, as evidenced by the more pronounced increase in proteinuria, mesangial expansion, and matrix gene expression. This was associated with a more marked renal/glomerular AGE accumulation, suggesting that it was attributable to the lack of **galectin-3** AGE-receptor function. These data indicate that **galectin-3** is upregulated under **diabetic** conditions and is operating in vivo to provide protection toward AGE-induced tissue injury, as opposed to RAGE.

L70 ANSWER 12 OF 72 MEDLINE on STN
ACCESSION NUMBER: 2003342052 MEDLINE
DOCUMENT NUMBER: 22756534 PubMed ID: 12874444
TITLE: Role of **galectin-3** in **diabetic** nephropathy.
AUTHOR: Iacobini Carla; Amadio Lorena; Oddi Giovanna; Ricci Carlo; Barsotti Paola; Missori Serena; Sorcini Mariella; Di Mario Umberto; Pricci Flavia; Pugliese Giuseppe
CORPORATE SOURCE: Laboratory of Metabolism and Pathological Biochemistry, Section of Endocrine Biochemistry, Istituto Superiore di Sanita, Rome, Italy.
SOURCE: JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY, (2003 Aug) 14 (8 Suppl 3) S264-70. Ref: 49
Journal code: 9013836. ISSN: 1046-6673.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200311
ENTRY DATE: Entered STN: 20030723
Last Updated on STN: 20031113
Entered Medline: 20031112
AB The advanced glycosylation end products (AGE) participate in the pathogenesis of nephropathy and other diabetic complications through several mechanisms, including their binding to cell surface receptors.

The AGE receptors include RAGE, the macrophage scavenger receptors, OST-48 (AGE-R1), 80K-H (AGE-R2), and galectin-3 (AGE-R3). Galectin-3 interacts with the beta-galactoside residues of cell surface and matrix glycoproteins via the carbohydrate recognition domain and with intracellular proteins via peptide-peptide associations mediated by its N-terminus domain. These structural properties enable galectin-3 to exert multiple functions, including the mRNA splicing activity, the control of cell cycle, the regulation of cell adhesion, the modulation of allergic reactions, and the binding of AGE. The lack of transmembrane anchor sequence or signal peptide suggests that it is associated with other AGE receptors, possibly AGE-R1 and AGE-R2, to form an AGE-receptor complex, rather than playing an independent role. In target tissues of **diabetic** vascular complications, such as the endothelium and mesangium, **galectin-3** is weakly expressed under basal conditions and is markedly upregulated by the **diabetic** milieu (and to a lesser extent by aging). **Galectin-3** -deficient mice were found to develop accelerated **diabetic** glomerulopathy versus the wild-type animals, as evidenced by the more pronounced increase in proteinuria, mesangial expansion, and matrix gene expression. This was associated with a more marked renal/glomerular AGE accumulation, suggesting that it was attributable to the lack of galectin-3 AGE-receptor function. These data indicate that **galectin-3** is upregulated under **diabetic** conditions and is operating in vivo to provide protection toward AGE-induced tissue injury, as opposed to RAGE.

L70 ANSWER 13 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 5

ACCESSION NUMBER: 2003:584893 BIOSIS
DOCUMENT NUMBER: PREV200300585872
TITLE: Combined proteome- and genome analysis reveal **galectin-3** as a candidate protein in type 1 **diabetes** protecting against the toxic effect of cytokines.
AUTHOR(S): Karlsen, Allan E. [Reprint Author]; Larsen, Zenia M. [Reprint Author]; Sparre, Thomas [Reprint Author]; Larsen, Martin R.; Mahmood, Amer [Reprint Author]; Storling, Joachim [Reprint Author]; Roepstorff, Peter; Larsen, Peter Mose; Fey, Stephen; Nielsen, Karin [Reprint Author]; Heding, Peter [Reprint Author]; Johannesen, Jesper [Reprint Author]; Kristiansen, Ole P. [Reprint Author]; Christensen, Ulla B. [Reprint Author]; Kockum, Ingrid; Luthrnan, Holger; Nerup, Jorn [Reprint Author]; Pociot, Flemming [Reprint Author]
CORPORATE SOURCE: Steno Diabetes Center, Gentofte, Denmark
SOURCE: European Cytokine Network, (Sept 2003) Vol. 14, No. Supplement 3, pp. 22. print.
Meeting Info.: Annual Meeting of the International Cytokine Society. Dublin, Ireland. September 20-24, 2003.
ISSN: 1148-5493.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Dec 2003
Last Updated on STN: 10 Dec 2003

L70 ANSWER 14 OF 72 DRUGU COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2003-11235 DRUGU P
TITLE: Managing heart disease. Mechanisms of cardiovascular complications in diabetes and potential new pharmacological therapies.
AUTHOR: He Z; Rask Madsen C; King G L
CORPORATE SOURCE: Joslin-Diabetes-Center
LOCATION: Boston, Mass., USA
SOURCE: Eur.Heart J. (5, Suppl. B, B51-57, 2003) 109 Ref.

CODEN: EHJODF ISSN: 0195-668X
AVAIL. OF DOC.: Joslin Diabetes Center, Section for Vascular Cell Biology, One Joslin Place, Room 4504, Boston, MA 02215, U.S.A. (G.L.K.).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AN 2003-11235 DRUGU P
AB Management of heart disease and the mechanisms of cardiovascular complications in diabetes and potential new pharmacological therapies are reviewed. Insulin sensitive and insulin resistant cardiovascular mechanisms (mediators of vasomotion, nitric-oxide (NO) and endothelin-I, vascular endothelial growth factor (VEGF), a mediator of angiogenesis, proliferation and apoptosis and cardiac substrate metabolism) are discussed. Mechanisms of hyperglycemia induced vascular damage (the advanced glycation end-product (AGE) theory, the reactive oxygen species theory, the protein kinase C (PKC) theory, and the cross-talk between these theories) are presented. Therapeutic strategies (targeting advanced glycation-end products, antioxidants, signaling molecules as targets, and anti-inflammatory agents) are all discussed.
ABEX A decrease in NO production in insulin resistance and **diabetes** is important in **diabetic** vascular complications. The insulin-stimulated vasodilatation is dependent on endothelium-derived NO. The VEGF regulates vascular permeability and angiogenesis, and can improve clinical outcomes in ischemic heart disease. Insulin has an antiapoptotic effect in endothelial cell culture. The myocardium utilizes fatty acids than glucose as an energy substrate. The improvements of insulin sensitivity of cardiovascular mechanisms prevent the **diabetic** complications. The AGEs can alter cellular functions by binding to the receptors for AGEs, (RAGE) or to the macrophage scavenger receptor, p60, p90 and **galectin-3** . The oxidative phosphorylation of glucose in mitochondria generates superoxide anion, the production of which increases with the hyperglycemia. The PKCs regulate vascular permeability, vasodilator release, endothelial activation, cardiomyocyte contractility and growth factor signaling. The over-expression of PKC-beta-2 results in a severe ventricular hypotrophy, interstitial fibrosis, cardiomyocyte necrosis and impaired contractility reminiscent of **diabetic** cardiomyopathy. Aminoguanidine prevent the complications of **diabetes** and the soluble range prevents the hyperglycemia. Antioxidants (vitamin E) block the microvascular complications of **diabetes**. LY-333531 can prevent or reverse early hemodynamic changes observed in **diabetic** retinopathy. The inactivation of IkappaB kinase can be prevented by high-dose aspirin and tumor necrosis factor-alpha, while infliximab improves endothelial dysfunction in rheumatoid arthritis. (SR/NK)

L70 ANSWER 15 OF 72 PASCAL on STN
ACCESSION NUMBER: 2004-0016727 PASCAL

TITLE (IN ENGLISH): Role of **galectin-3** in **diabetic** nephropathy
Reactive oxygen species and diabetic nephropathy
AUTHOR: IACOBINI Carla; AMADIO Lorena; ODDI Giovanna; RICCI Carlo; BARSOTTI Paola; MISSORI Serena; SORCINI Mariella; DI MARIO Umberto; PRICCI Flavia; PUGLIESE Giuseppe
HI BAHL LEE (ed.); HUNJOO HA (ed.); KING George L. (ed.)
CORPORATE SOURCE: Laboratory of Metabolism and Pathological Biochemistry, Section of Endocrine Biochemistry, Istituto Superiore di Sanita, Rome, Italy; Department of Clinical Sciences, Division of Endocrinology, "La

Sapienza" University, Rome, Italy; Department of Experimental Medicine and Pathology, Section of Ultrastructural Pathology, "La Sapienza" University, Rome, Italy
Hyonam Kidney Laboratory, Soon Chun Hyang University, Seoul, Korea, Republic of; Joslin Diabetes Center, Harvard Medical School, Boston, Massachusetts, United States
Soon Chun Hyang University. Hyonam Kidney Laboratory, Korea, Republic of (patr.)

SOURCE: Journal of the American Society of Nephrology, (2003), 14(SUP3), S264-S270, 49 refs.
Conference: 4 The Hyonam Kidney Laboratory, Soon Chun Hyang University International Diabetes Symposium, Seoul (Korea, Republic of), 18 Jan 2003
ISSN: 1046-6673
DOCUMENT TYPE: Journal; Conference
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-26049, 354000112669890120
AN 2004-0016727 PASCAL

AB The advanced glycosylation end products (AGE) participate in the pathogenesis of nephropathy and other **diabetic** complications through several mechanisms, including their binding to cell surface receptors. The AGE receptors include RAGE, the macrophage scavenger receptors, OST-48 (AGE-R1), 80K-H (AGE-R2), and **galectin-3** (AGE-R3). **Galectin-3** interacts with the .beta.-galactoside residues of cell surface and matrix glycoproteins via the carbohydrate recognition domain and with intracellular proteins via peptide-peptide associations mediated by its N-terminus domain. These structural properties enable **galectin-3** to exert multiple functions, including the mRNA splicing activity, the control of cell cycle, the regulation of cell adhesion, the modulation of allergic reactions, and the binding of AGE. The lack of transmembrane anchor sequence or signal peptide suggests that it is associated with other AGE receptors, possibly AGE-R1 and AGE-R2, to form an AGE-receptor complex, rather than playing an independent role. In target tissues of **diabetic** vascular complications, such as the endothelium and mesangium, **galectin-3** is weakly expressed under basal conditions and is markedly upregulated by the **diabetic** milieu (and to a lesser extent by aging). **Galectin-3** -deficient mice were found to develop accelerated **diabetic** glomerulopathy versus the wild-type animals, as evidenced by the more pronounced increase in proteinuria, mesangial expansion, and matrix gene expression. This was associated with a more marked renal/glomerular AGE accumulation, suggesting that it was attributable to the lack of **galectin-3** AGE-receptor function. These data indicate that **galectin-3** is upregulated under **diabetic** conditions and is operating in vivo to provide protection toward AGE-induced tissue injury, as opposed to RAGE.

L70 ANSWER 16 OF 72 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN

ACCESSION NUMBER: 2002-15178 BIOTECHDS
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist;
antisense oligonucleotide transfer and expression in host cell for drug screening and gene therapy
AUTHOR: KLOOG Y; HAKLAI R; PAZ A; EL AD-SFADIA G; BALLAN E
PATENT ASSIGNEE: UNIV RAMOT APPLIED RES and IND DEV LTD
PATENT INFO: WO 2002029031 11 Apr 2002
APPLICATION INFO: WO 2000-IL918 4 Oct 2000

PRIORITY INFO: US 2000-237858 4 Oct 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-435333 [46]
AN 2002-15178 BIOTECHDS
AB DERWENT ABSTRACT:

NOVELTY - Identifying (M1) cell membrane anchor proteins that bind a Ras protein (RP), involves preparing 2 reaction mixtures comprising RP, its cell membranes or fragments, where one mixture has a Ras antagonist, adding a cross linking agent, where complexes (C) between RP and other proteins are produced, separating (C), identifying (C), and separating RP from other proteins in (C), is new.

DETAILED DESCRIPTION - Identifying (M1) cell membrane anchor proteins that bind a Ras protein (RP), comprises: (a) preparing a first reaction mixture comprising RP, its cell membranes or fragments, and a second reaction mixture comprising RP and its cell membranes or fragments but not the Ras antagonist; (b) adding a cross-linking agent to the first and second reaction mixture, where cross linked (C) between RP and other proteins are produced; (c) separating each of the cross-linked (C) individually; (d) identifying (C) formed in the second reaction mixture that is disrupted by the Ras antagonist present in the first reaction mixture; and (e) separating the identified (C) from the other (C), and separating RP from the other protein in the separated (C) INDEPENDENT CLAIMS are also included for the following: (1) Identifying (M2) drug candidates that inhibit aberrant Ras activity, by preparing a reaction mixture containing RP, an anchor protein that binds RP and the drug candidate, and determining the effect of the drug candidate on interaction between RP and the anchor protein; (2) determining effective dosages of Ras antagonist that disrupt Ras-anchor protein binding, by contacting cells with the antagonist in-vivo or in-vitro, collecting the cells after contacting the cells, isolating cell membranes from the collected cells, measuring the decrease in anchor protein concentration per unit of cell membrane protein, and correlating the decrease with dosage of the Ras antagonist; (3) an antisense compound (AC) that specifically binds a nucleic acid encoding galectin-1, **galectin -3**, galectin-7 or galectin-8, and which causes degradation of the nucleic acid; (4) a composition comprising the above method.

BIOTECHNOLOGY - Preferred Method: In (M1), the Ras-antagonist is an inhibitor of prenylated or farnesylated RP, or is S-trans, trans-farnesylthiosalicylic acid (FTS) or its analog such as 5-fluoro-FTS, 5-chloro-FTS, 4-chloro-FTS, 2-chloro-5-farnesylaminobenzoic acid, farnesyl thionicotinic acid, S-farnesyl-methylthiosalicylic acid or 3-farnesylthio-cis-acrylic. The antagonist is an inhibitor of a non-prenylated RP. The cell membranes are obtained from NIH fibroblasts transformed with oncogenic K-Ras 4B (12V), H-Ras (12V) or N-Ras (13V), 518A2/N-Ras melanoma cells, 607B melanoma cells, Panc-1 cells containing oncogenic K-Ras, EJ cells containing H-Ras (12V) or MC-MA-11 cells. The cross linking agent is disucceninimidyl subarate (DSS), or dithiobis succinimdyl proprionate (DSP). In (M2), the effect of the drug candidate is determined by measuring change in extent of dimerization of RP, or binding of Raf protein to RP, or binding between RP and anchor protein, or the change in activation of Raf protein. The reaction mixture further comprises a cross-linking agent. RP or the anchor protein is immobilized on a matrix. The anchor and RP are in solution and are detectably labeled with a fluorescent protein (FP) such as green or yellow FP. The anchor protein comprises galectin-1, **galectin-3**, galectin-7 or galectin-8. RP and the anchor protein are provided in the form of living cells. Determination comprises measuring loss of RP from the anchor protein, and observing intracellular movement of RP or the anchor protein.

ACTIVITY - Cytostatic; Immunosuppressive; Antidiabetic; Antiatherosclerotic; Neuroprotective; Vasotropic; Hepatotropic. No suitable data given.

MECHANISM OF ACTION - Antisense therapy.

USE - M1 is useful for identifying a cell membrane anchor protein

that binds a Ras protein. M2 is useful for identifying drug candidates that inhibit aberrant Ras activity. AC comprising at least one phosphorathioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing AC into a patient exhibiting this problem (claimed). M1 is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterized by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis.

ADMINISTRATION - AC is administered to the patient by a liposome, at a dose of 0.06-7 mg/kg/day. No administration routes given.

EXAMPLE - Chemical cross-linkers were used to identify the rapidly dissociating complexes of Ras and Tas-interacting proteins. The Ras inhibitor farnesylthiosalicylic acid (FTS) was used as an analytical tool to identify complexes sensitive to this inhibitor. The analytical steps were performed with controls and with FTS-treated EJ cells in combination with the cross-linkers disuccininimidyl subarate (DSS) and dithiobis succinimdyl proprionate (DSP). When membranes of control and FTS-treated cells were exposed to these cross-linkers solubilized and fractionated on sodium dodecyl sulfate-containing gels, Ras-immunoreactive bands were clearly detected at 34-43, 50 and 70 kDa. These complexes were not detected in the absence of the cross linkers. The broad band at 34-43 was not present in cells or cell membranes after treatment with FTS. Interaction of Ras with the IDRAs was not disrupted with analogs of FTS that had no anti-Ras activity on tumor cells. Triton X-100 extracts of the membranes containing Ras complexes formed by cross-linking with DSP were used for subsequent purification. FPLC MonoQ ion exchange chromatography yielded an enriched preparation of Ras-protein complexes. Ras and all species of the Ras-immunoreactive complexes detected in the pooled MonoQ fractions were specifically immunoprecipitated by biotin-pan Ras antibody. Assuming that the larger complexes may represent multiples of the 34-43 kDa complexes, the Ras-immunoreactive band with the lowest molecular weight was further purified. Two consecutive gel purification steps were used. Under non-reducing conditions only the 34-43 kDa Ras-immunoreactive band was detected by Western immunoblotting with Ras antibody and 21 kDa Ras was released from the complexes by reduction with dithiothreitol. In addition, two major proteins were released by DTT from the 34-43 kDa Ras-immunoreactive complexes. One was a 14-15 kDa and the other a 19-20 kDa protein. The amounts of both of these were significantly lower in Rat-1 cells compared to EJ cells. The 14-15 kDa protein was barely detected in the myr H-Ras (12V) cells. These results suggested that the 14-15 kDa protein interacted with the farnesylated H-Ras and was involved in cell transformation induced by this Ras isoform. The highly purified protein released by reduction was subjected to trypsin cleavage followed by microbore high performance liquid chromatography (HPLC) separation of the tryptic fragments and MS analysis of the isolated peptides. Fragmentation patterns of two peptides corresponded precisely to the 14kDa rat galectin-1. The fact that galectin was a 14 kDa protein further confirmed that the FTS-sensitive Ras-interacting protein was galectin-1, a previously identified sugar binding protein. (62 pages)

L70 ANSWER 17 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	2002:927718 CAPLUS
DOCUMENT NUMBER:	138:12503
TITLE:	Mammalian diabetes-mediating proteins identification for diagnosis and therapy
INVENTOR(S):	Larsen, Peter Mose; Fey, Stephen J.; Karlsen, Allan E.; Sparre, Thomas; Nerup, Jorn
PATENT ASSIGNEE(S):	Syddansk Universitet, Den.
SOURCE:	PCT Int. Appl., 128 pp. CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002097441	A2	20021205	WO 2002-DK368	20020529

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DK 2001-852 A 20010529
DK 2002-446 A 20020322

AB Provided are mammalian secreted and non-secreted diabetes mediating proteins, including protective and deleterious diabetes-mediating proteins, as well as polynucleotides encoding same, drug screening methods for identifying a test compd. capable of altering the expression of a diabetes-mediating protein, and methods of preventing or ameliorating diabetes by administering a compd. capable of altering the expression of a diabetes-mediating protein. The proteins were identified by monitoring IL-1.beta. induced protein changes in diabetes prone mammalian islets of Langerhans using two-dimensional gel electrophoresis. Protein spots that significantly changed expression levels after exposure to IL-1.beta. were cut out of the gels and subjected to MALDI mass spectrometry. Eighty-two significantly changed protein spots were detected. Pos. identification was obtained for a total of 45 different proteins from 51 of the 82 spots.

L70 ANSWER 18 OF 72 USPATFULL on STN
ACCESSION NUMBER: 2002:148596 USPATFULL
TITLE: Method and kit for predicting cancer
INVENTOR(S): Woo, Hee Jong, Kyonggi-Do, KOREA, REPUBLIC OF
PATENT ASSIGNEE(S): ZARITA BIOTECH CO., LTD., Kyonggi-do, KOREA, REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002076738	A1	20020620	
APPLICATION INFO.:	US 2001-972356	A1	20011009	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	KR 2000-63868	20001030

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: STAAS & HALSEY LLP, 700 11TH STREET, NW, SUITE 500, WASHINGTON, DC, 20001
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 865
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method and a kit for diagnosing and/or predicting the occurrence of cancer or the risk of contracting a cancer by measuring the concentration of a cancer screening antigen(CSA) in blood, which changes before the occurrence of the cancer in a patient. The method of diagnosing or predicting the occurrence of cancer or the risk of contracting a cancer comprising the steps of: determining a concentration of galectin-3 in a blood sample by reacting the blood

sample with a monoclonal antibody of the galectin-3; comparing the determined concentration of the galectin-3 with concentration of the galectin-3 in a blood sample of a normal human; and predicting the risk of contracting a cancer if the determined concentration is greater than the concentration of the galectin-3 in blood of the normal human.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L70 ANSWER 19 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:877818 CAPLUS
DOCUMENT NUMBER: 138:151940
TITLE: IL-1.beta. induced protein changes in diabetes prone BB rat islets of Langerhans identified by proteome analysis
AUTHOR(S): Sparre, T.; Bjerre Christensen, U.; Mose Larsen, P.; Fey, S. J.; Wrzesinski, K.; Roepstorff, P.; Mandrup-Poulsen, T.; Pociot, F.; Karlsen, A. E.; Nerup, J.
CORPORATE SOURCE: Steno Diabetes Center, Gentofte, DK-2820, Den.
SOURCE: Diabetologia (2002), 45(11), 1550-1561
CODEN: DBTGAJ; ISSN: 0012-186X
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Aims/hypothesis. Type I (insulin-dependent) diabetes mellitus is characterized by selective destruction of the insulin producing beta cells. Interleukin-1.beta. (IL-1.beta.) modulates the beta-cell function, protein synthesis, energy prodn. and causes apoptosis. We have previously shown changes in the expression of 82 out of 1 815 protein spots detected by two dimensional gel electrophoresis in IL-1.beta. exposed diabetes prone Bio Breeding (BB-DP) rat islets of Langerhans in vitro. The aim of this study was to identify the proteins in these 82 spots by mass spectrometry and compare these changes with those seen in IL-1.beta. exposed Wistar Furth (WF) rat islets. Methods. The 82 protein spots, that changed expression after IL-1.beta. exposure, were all re-identified on preparative gels of 200 000 neonatal WF rat islets, cut out and subjected to mass spectrometry for identification. Results. Forty-five different proteins were identified from 51 spots and grouped according to function: (i) energy transduction and redox potentials; (ii) glycolytic and Krebs cycle enzymes; (iii) protein, DNA and RNA synthesis, chaperoning and protein folding; (iv) signal transduction, regulation, differentiation and apoptosis; (v) cellular defense; and (vi) other functions. Comparison of IL-1.beta. exposed BB-DP and WF islets showed common changes in 14 proteins and several proteins influencing similar pathways, suggesting that similar routes in the two strains lead to beta-cell destruction. Conclusion/interpretation. We demonstrate that proteome anal. is a powerful tool to identify proteins and pathways in BB-DP rat islets exposed to IL-1.beta..
REFERENCE COUNT: 97 THERE ARE 97 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 20 OF 72 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 6
ACCESSION NUMBER: 2002075627 EMBASE
TITLE: CD36, serves as a receptor for advanced glycation endproducts (AGE).
AUTHOR: Ohgami N.; Nagai R.; Ikemoto M.; Arai H.; Miyazaki A.; Hakamata H.; Horiuchi S.; Nakayama H.
CORPORATE SOURCE: S. Horiuchi, Department of Biochemistry, Kumamoto University, School of Medicine, 2-2-1 Honjo, Kumamoto 860-0811, Japan. horiuchi@gpo.kumamoto-u.ac.jp
SOURCE: Journal of Diabetes and its Complications, (2002) 16/1 (56-59).
Refs: 7
ISSN: 1056-8727 CODEN: JDICE2

PUBLISHER IDENT.: S 1056-8727(01)00208-2
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 018 Cardiovascular Diseases and Cardiovascular Surgery
029 Clinical Biochemistry
003 Endocrinology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Interaction of advanced glycation endproducts (AGE) with AGE receptors induces several cellular phenomena relating potentially to **diabetic** complications. Five AGE receptors identified so far are receptor for AGE (RAGE), 80 K-H, OST-48, **galectin-3**, and macrophage scavenger receptor, types I and II (SR-A) [Eur. J. Biochem. 230 (1995) 408; Nature 386 (1997) 292.]. Since SR-A is known to belong to the class A scavenger receptor family and the scavenger receptor collectively represents a family of multiligand lipoprotein receptors, it is possible that CD36 belonging to class B scavenger receptor family (SR-B) can recognize AGE proteins as a ligand. This was tested in the present study at the cellular level by using Chinese hamster ovary (CHO) cells overexpressing human CD36 (CHO-CD36 cells). (125)I-AGE-bovine serum albumin (BSA) was endocytosed in a dose-dependent fashion and underwent lysosomal degradation by CHO-CD36, but not wild-type CHO cells. Endocytic uptake of (125)I-AGE-BSA by these cells was inhibited 50% by oxidized low-density lipoprotein (Ox-LDL) and 60% by FA6-152, an anti-CD36 antibody inhibiting cellular binding of Ox-LDL. Our results indicate that CD36 expressed by these cells mediates endocytic uptake and subsequent intracellular degradation of AGE proteins. Since CD36 is one of the major Ox-LDL receptors and is up-regulated in macrophage- and smooth muscle cell-derived foam cells in human atherosclerotic lesions, the present results suggest that, like Ox-LDL, AGE proteins generated in situ are recognized by CD36, which might contribute to the pathogenesis of **diabetic** macrovascular complications. Copyright .COPYRGT. 2002 Elsevier Science Inc.

L70 ANSWER 21 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:179383 CAPLUS
TITLE: N.epsilon.-(carboxymethy)lysine-induced mesangial cell activation
AUTHOR(S): Lim, Hyun Jin; Song, Jaesook; Ha, Hunjoo; Lee, Hi Bahl
CORPORATE SOURCE: Department of Internal Medicine, Hyonam Kidney Laboratory, College of Medicine, Soon Chun Hyang University, Seoul, S. Korea
SOURCE: Taehan Sinjang Hakhoechi (2002), 21(1), 20-28
CODEN: TSHACY; ISSN: 1225-0015
PUBLISHER: Korean Society of Nephrology
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB Background:Advanced glycation end products (AGE) are independent risk factors in the development and progression of diabetic nephropathy. Receptor for AGE(RAGE) is considered the main receptor involved in AGE-induced cell activation. **Galectin-3**, another AGE receptor, has recently been found up-regulated in mesangial cells(MC) cultured under high glucose and in **diabetic** rat kidneys. N.epsilon.-(carboxymethyl)lysine(CML) is a well characterized AGE but its role in MC activation is unknown. The present study examd. the effects of CML on MC proliferation and extracellular matrix(ECM) secretion. Methods: Synchronized rat MC were stimulated with different concns. of CML-bovine serum albumin(BSA), control BSA, and transforming growth factor-.beta.1(TGF-.beta.1) for up to 72 h. Cell proliferation was measured by [3H]-thymidine incorporation. Fibronectin, TGF-.beta.1, plasminogen activator inhibitor(PAI)-1 secreted into the media and RAGE and galectin-3 expression in MC were measured by Western blot anal. and ELISA Results: 1,000 .mu.g/mL of CML-BSA decreased [3H]-thymidine incorporation by MC at 48 h and 10 ng/mL TGF-.beta.1 at 24 and 48 h. CML-BSA 100 and 1,000 pg/mL, control BSA 1,000 pg/mL, and TGF 8 10 ng/mL

increased fibronectin secretion at 48 h CML-BSA up to 1,000 pg/mL did not affect TGF B1 or PAI-1 secretion. TGF-.beta.1 10 ng/mL, however, significantly increased PAI-1 secretion. Cultured MC expressed both RAGE and galec- tin-3. CML-BSA 100 .mu.g/mL upregulated galectin-3 expression. Conclusion: CML-BSA decreased MC proliferation and increased fibronectin secretion, suggesting that CML may lead to ECM accumulation and glomerulosclerosis in diabetic animals. MC express RAGE and galectin-3 constitutively and CML-induced galectin-3 upregulation may have a role in AGE-induced MC activation.

L70 ANSWER 22 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2002:594077 BIOSIS
DOCUMENT NUMBER: PREV200200594077
TITLE: A common mutation of an age-binding protein is not associated with diabetic microvascular complications in Type II diabetes.
AUTHOR(S): Neugebauer, S. [Reprint author]; Daimon, M.; Baba, T. [Reprint author]; Kato, T.; Watanabe, T. [Reprint author]
CORPORATE SOURCE: Internal Medicine 3, Fukushima Medical University, Fukushima, Japan
SOURCE: Diabetologia, (August, 2002) Vol. 45, No. Supplement 2, pp. A 358. print.
Meeting Info.: 38th Annual Meeting of the European Association for the Study of Diabetes (EASD). Budapest, Hungary. September 01-05, 2002. European Association for the Study of Diabetes.
CODEN: DBTGAJ. ISSN: 0012-186X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Nov 2002
Last Updated on STN: 20 Nov 2002

L70 ANSWER 23 OF 72 PHIN COPYRIGHT 2004 PJB on STN

ACCESSION NUMBER: 2001:16585 PHIN
DOCUMENT NUMBER: S00722980
DATA ENTRY DATE: 21 Aug 2001
TITLE: PUBLICATIONS - New from Scrip Reports - Novel Pharmacologies Therapeutic and Market Outlook
SOURCE: Scrip-Online-plus (2001)
DOCUMENT TYPE: Newsletter
FILE SEGMENT: FULL

L70 ANSWER 24 OF 72 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
DUPLICATE
ACCESSION NUMBER: 2001:37411612 BIOTECHNO
TITLE: CD36, a Member of the Class B Scavenger Receptor Family, as a Receptor for Advanced Glycation End Products
AUTHOR: Ohgami N.; Nagai R.; Ikemoto M.; Arai H.; Kuniyasu A.; Horiuchi S.; Nakayama H.
CORPORATE SOURCE: S. Horiuchi, Department of Biochemistry, Kumamoto Univ. School of Medicine, 2-2-1 Honjo, Kumamoto 860-0811, Japan.
E-mail: horiuchi@gpo.kumamoto-u.ac.jp
SOURCE: Journal of Biological Chemistry, (02 FEB 2001), 276/5 (3195-3202), 73 reference(s)
CODEN: JBCHA3 ISSN: 0021-9258
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2001:37411612 BIOTECHNO
AB Interaction of advanced glycation end products (AGE) with AGE receptors

induces several cellular phenomena potentially relating to **diabetic** complications. Five AGE receptors identified so far are RAGE (receptor for AGE), **galectin-3**, 80K-H, OST-48, and SRA (macrophage scavenger receptor class A types I and II). Since SRA is known to belong to the class A scavenger receptor family, and the scavenger receptor collectively represents a family of multiligand lipoprotein receptors, it is possible that CD36, although belonging to the class B scavenger receptor family, can recognize AGE proteins as ligands. This was tested at the cellular level in this study using Chinese hamster ovary (CHO) cells overexpressing human CD36 (CD36-CHO cells). Cellular expression of CD36 was confirmed by immunoblotting and immunofluorescent microscopy using anti-CD36 antibody. Upon incubation at 37 .degree.C, .sup.1.sup.2.sup.5I-AGE-bovine serum albumin (AGE-BSA) and .sup.1.sup.2.sup.5I-oxidized low density lipoprotein (LDL), an authentic ligand for CD36, were endocytosed in a dose-dependent fashion and underwent lysosomal degradation by CD36-CHO cells, but not wild-type CHO cells. In binding experiments at 4 .degree.C, .sup.1.sup.2.sup.5I-AGE-BSA exhibited specific and saturable binding to CD36-CHO cells (K.sub.d = 5.6 .mu.g/ml). The endocytic uptake of .sup.1.sup.2.sup.5I-AGE-BSA by these cells was inhibited by 50% by oxidized LDL and by 60% by FA6-152, an anti-CD36 antibody inhibiting cellular binding of oxidized LDL. Our results indicate that CD36 expressed by these cells mediates the endocytic uptake and subsequent intracellular degradation of AGE proteins. Since CD36 is one of the major oxidized LDL receptors and is up-regulated in macrophage- and smooth muscle cell-derived foam cells in human atherosclerotic lesions, these results suggest that, like oxidized LDL, AGE proteins generated in situ are recognized by CD36, which might contribute to the pathogenesis of **diabetic** macrovascular complications.

L70 ANSWER 25 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 8

ACCESSION NUMBER: 2001:568497 BIOSIS
DOCUMENT NUMBER: PREV200100568497
TITLE: Accelerated **diabetic** glomerulopathy in **galectin-3**/AGE receptor 3 knockout mice.
AUTHOR(S): Pugliese, Giuseppe [Reprint author]; Pricci, Flavia; Iacobini, Carla; Leto, Gaetano; Amadio, Lorena; Barsotti, Paola; Frigeri, Luciano; Hsu, Dan K.; Vlassara, Helen; Liu, Fu-Tong; Di Mario, Umberto
CORPORATE SOURCE: Dipartimento di Scienze Cliniche (Endocrinologia), Viale del Policlinico, 155, 00161, Rome, Italy giuseppe.pugliese@uniromal.it
SOURCE: FASEB Journal, (November, 2001) Vol. 15, No. 13, pp. 2471-2479. print.
CODEN: FAJOEC. ISSN: 0892-6638.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 2001
Last Updated on STN: 25 Feb 2002

AB Several molecules were shown to bind advanced glycation end products (AGEs) in vitro, but it is not known whether they all serve as AGE receptors and which functional role they play in vivo. We investigated the role of **galectin-3**, a multifunctional lectin with (anti)adhesive and growth-regulating properties, as an AGE receptor and its contribution to the development of **diabetic** glomerular disease, using a knockout mouse model. **Galectin-3** knockout mice obtained by gene ablation and the corresponding wild-type mice were rendered **diabetic** with streptozotocin and killed 4 months later, together with age-matched nondiabetic controls. Despite a comparable degree of metabolic derangement, galectin-3-deficient mice developed accelerated glomerulopathy vs. the wild-type animals, as evidenced by the more pronounced increase in proteinuria, extracellular matrix gene expression, and mesangial expansion. This was associated with a more marked renal/glomerular AGE accumulation, indicating it was

attributable to the lack of galectin-3 AGE receptor function. The galectin-3-deficient genotype was associated with reduced expression of receptors implicated in AGE removal (macrophage scavenger receptor A and AGE-R1) and increased expression of those mediating cell activation (RAGE and AGE-R2). These results show that the galectin-3-regulated AGE receptor pathway is operating in vivo and protects toward AGE-induced tissue injury in contrast to that through RAGE.

L70 ANSWER 26 OF 72 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 9

ACCESSION NUMBER: 2002025719 EMBASE
TITLE: CD36, a member of class B scavenger receptor family, is a receptor for advanced glycation end products.
AUTHOR: Ohgami N.; Nagai R.; Ikemoto M.; Arai H.; Kuniyasu A.; Horiuchi S.; Nakayama H.
CORPORATE SOURCE: Dr. S. Horiuchi, Department of Biochemistry, Kumamoto Univ. School of Medicine, 2-2-1 Honjo, Kumamoto 860-0811, Japan. horiuchi@gpo.kumamoto-u.ac.jp
SOURCE: Annals of the New York Academy of Sciences, (2001) 947/- (350-355).
Refs: 5
ISSN: 0077-8923 CODEN: ANYAA
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Interaction of advanced glycation end products (AGE) with AGE-receptors induces several cellular phenomena relating potentially to **diabetic** complications. Five AGE-receptors identified so far are RAGE (receptor for AGE), 80 K-H, OST-48, **galectin-3**, and SR-A (macrophage scavenger receptor type I and II). Since SR-A belongs to the class A scavenger receptor family and the scavenger receptor collectively represents a family of multiligand lipoprotein receptors, it is possible that CD36 belonging to the class B scavenger receptor family (SR-B) can recognize AGE-proteins as a ligand. This was tested in the present study at the cellular level using CHO (Chinese hamster ovary) cells overexpressing human CD36 (CHO-CD36 cells), (125)I-AGE-BSA (bovine serum albumin) was endocytosed in a dose-dependent fashion and underwent lysosomal degradation by CHO-CD36 but not wild-type CHO cells. Endocytic uptake of (125)I-AGE-BSA by these cells was inhibited 50% by oxidized LDL (Ox-LDL) and 60% by FA6-152, an anti-CD36 antibody inhibiting cellular binding of Ox-LDL. Our results indicate that CD36 expressed by these cells mediates endocytic uptake and subsequent intracellular degradation of AGE-proteins. Because CD36 is one of the major Ox-LDL receptors and is upregulated in macrophage- and smooth muscle cell-derived foam cells in human atherosclerotic lesions, the present results suggest that, like Ox-LDL, AGE-proteins generated in situ are recognized by CD36, which might contribute to the pathogenesis of **diabetic** macrovascular complications.

L70 ANSWER 27 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 10

ACCESSION NUMBER: 2001:306914 CAPLUS
DOCUMENT NUMBER: 134:293560
TITLE: AGE and AGE-receptors
AUTHOR(S): Ohgami, Nobutaka; Nagai, Ryoji; Nakayama, Hitoshi; Horiuchi, Seikoh
CORPORATE SOURCE: Dep. Siofunctional Chem., Fac. Pharm. Sci., Kumamoto Univ., 5-1, Oe-honmachi, Kumamoto, 862-0973, Japan
SOURCE: Seikagaku (2001), 73(3), 200-204
CODEN: SEIKAQ; ISSN: 0037-1017
PUBLISHER: Nippon Seikagakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with 15 refs., on advanced glycation end products (AGE) and its

receptors involved in aging-related **diabetic** complications and atherosclerosis, discussing AGE formation and its relevance to aging, class A scavenger receptors involved in AGE clearance, expression and functions of AGE-binding proteins (OST-48, 80K-H, and **galectin-3**), function of RAGE (receptor for AGE), and physiol. significance of a novel AGE receptor, CD36, belonging to the scavenger receptor family.

L70 ANSWER 28 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 11
ACCESSION NUMBER: 2000:116925 CAPLUS
DOCUMENT NUMBER: 132:165131
TITLE: Pharmaceutical composition having inhibitory effect on overproduction and accumulation of extracellular matrix
INVENTOR(S): Sasaki, Satoshi; Sumi, Yoshihiko; Hughes, Reginald Colin
PATENT ASSIGNEE(S): Teijin Limited, Japan
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000007624	A2	20000217	WO 1999-JP4238	19990805
WO 2000007624	A3	20000622		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9950653	A1	20000228	AU 1999-50653	19990805
EP 1104307	A2	20010606	EP 1999-935073	19990805
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002522398	T2	20020723	JP 2000-563306	19990805

PRIORITY APPLN. INFO.: JP 1998-233499 A 19980806
WO 1999-JP4238 W 19990805

AB A pharmaceutical compn. having an inhibitory effect on the overprodn. and the accumulation of extracellular matrix, said compn. comprising as an active ingredient a compd. that inhibits the biol. activity of **galectin-3**, which pharmaceutical compn. can serve as a therapeutic or preventive agent for glomerular nephritis, **diabetic** nephropathy or tissue fibrosis, as well as the use of said compd. for the prodn. of pharmaceuticals for the above-mentioned use, and a method for inhibition of the overprodn. and accumulation of the extracellular matrix.

L70 ANSWER 29 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:759895 CAPLUS
DOCUMENT NUMBER: 134:28172
TITLE: The expression of adipogenic genes is decreased in obesity and diabetes mellitus
AUTHOR(S): Nadler, Samuel T.; Stoehr, Jonathan P.; Schueler, Kathryn L.; Tanimoto, Gene; Yandell, Brian S.; Attie, Alan D.
CORPORATE SOURCE: Department of Biochemistry, University of Wisconsin, Madison, WI, 53706, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2000), 97(21), 11371-11376
CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Obesity is strongly correlated with type 2 diabetes mellitus, a common disorder of glucose and lipid metab. Although adipocytes are crit. in obesity, their role in diabetes has only recently been appreciated. The authors conducted studies by using DNA microarrays to identify differences in gene expression in adipose tissue from lean, obese, and obese-diabetic mice. The expression level of over 11,000 transcripts was analyzed, and 214 transcripts showed significant differences between lean and obese mice. Surprisingly, the expression of genes normally assocd. with adipocyte differentiation were down-regulated in obesity. Not all obese individuals will become diabetic; many remain normoglycemic despite profound obesity. Understanding the transition to obesity with concomitant diabetes will provide important clues to the pathogenesis of type 2 diabetes. Therefore, the authors examd. the levels of gene expression in adipose tissue from five groups of obese mice with varying degrees of hyperglycemia, and the authors identified 88 genes whose expression strongly correlated with diabetes severity. This group included many genes that are known to be involved in signal transduction and energy metab. as well as genes not previously examd. in the context of diabetes. The authors' data show that a decrease in expression of genes normally involved in adipogenesis is assocd. with obesity, and the authors further identify genes important for subsequent development of type 2 diabetes mellitus.
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 30 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 12
ACCESSION NUMBER: 2001:233192 BIOSIS
DOCUMENT NUMBER: PREV200100233192
TITLE: The **diabetic** milieu modulates the advanced glycation end product-receptor complex in the mesangium by inducing or upregulating **galectin-3** expression.
AUTHOR(S): Pugliese, Giuseppe [Reprint author]; Pricci, Flavia; Leto, Gaetano; Amadio, Lorena; Iacobini, Carla; Romeo, Giulio; Lenti, Luisa; Sale, Patrizio; Gradini, Roberto; Liu, Fu-Tong; Di Mario, Umberto
CORPORATE SOURCE: Diabetes, Endocrinology and Metabolism Foundation, Largo Marchiafava 1, 00161, Rome, Italy
demfound@tin.it
SOURCE: Diabetes, (July, 2000) Vol. 49, No. 7, pp. 1249-1257. print.
CODEN: DIAEAZ. ISSN: 0012-1797.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 16 May 2001
Last Updated on STN: 18 Feb 2002
AB Nonenzymatic glycation has been implicated in the pathogenesis of the dysregulated tissue remodeling that characterizes diabetic glomerulopathy, via the formation of advanced glycation end products (AGEs) and their binding to cell surface receptors. Several AGE-binding proteins have been identified so far, including p60, p90, and the adhesive and growth-regulating lectin galectin-3 (Gal-3), the components of the so-called AGE-receptor complex. This study aimed to evaluate the mesangial expression of the AGE-receptor complex and its modulation by the diabetic milieu, both in vivo, in nondiabetic versus streptozotocin-induced diabetic rats, and in vitro, in mesangial cells exposed to either normal glucose (NG) levels (5.5 mmol/l), as compared with high glucose (HG) levels (30 mmol/l) and iso-osmolar mannitol (M), or to native bovine serum albumin (BSA), as compared with glycated BSA with AGE formation (BSA-AGE) and glycated BSA in which AGE formation was prevented by aminoguanidine (BSA-AM). In vivo, Gal-3 protein and mRNA were not

detectable in glomeruli from nondiabetic rats until 12 months after initiating the study. On the contrary, in **diabetic** rats, **Gal-3** expression was observed at 2 months of disease duration, and it increased thereafter. Both p60 and p90 immunoreactivities were observed at the glomerular level with slightly increased expression of p90, but not p60, in diabetic versus nondiabetic animals. In vitro, Gal-3 was not detectable in mesangial cells cultured in NG (although it became evident after a certain number of passages in culture), whereas Gal-3 was detectable in cells grown on BSA. Prolonged exposure (2-4 weeks) of mesangial cells to HG but not to M, as well as growing cells on BSA-AGE and, to a lesser extent, BSA-AM, induced or significantly increased the expression of Gal-3, both protein (up to 2.65-fold) and mRNA (up to 3.10-fold) and its secretion in the medium (by apprx50%). Both p60 and p90 were demonstrated in mesangial cells under NG conditions, and the expression of p90, but not p60, was upregulated by apprx20% by HG or BSA-AGE. These results indicate that 1) under basal conditions, **Gal-3**, unlike p90 and p60, is not detectable in the mesangium but becomes expressed with aging and 2) the **diabetic** milieu induces or upregulates **Gal-3** production, whereas it increases only slightly the expression of p90, but not p60. Gal-3 expression or overexpression may modulate the AGE-receptor-mediated events by modifying the function of the AGE-receptor complex. Additionally, it may exert direct effects on tissue remodeling by virtue of its adhesive and growth-regulating properties.

L70 ANSWER 31 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 13

ACCESSION NUMBER: 2000:667186 CAPLUS
DOCUMENT NUMBER: 133:347635
TITLE: Role of galectin-3 as a receptor for advanced glycosylation end products
AUTHOR(S): Pricci, Flavia; Leto, Gaetano; Amadio, Lorena; Iacobini, Carla; Romeo, Giulio; Cordone, Samantha; Gradini, Roberto; Barsotti, Paola; Liu, Fu-Tong; Di Mario, Umberto; Pugliese, Giuseppe
CORPORATE SOURCE: Department of Clinical Sciences, Division of Endocrinology, "La Sapienza" University, Rome, Italy
SOURCE: Kidney International, Supplement (2000), 77, S31-S39
CODEN: KISUDF; ISSN: 0098-6577
PUBLISHER: Blackwell Science, Inc.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 90 refs. The advanced glycosylation end product (AGE)-binding proteins identified so far include the components of the AGE-receptor complex p60, p90 and galectin-3, receptor for advanced glycosylation end products (RAGE), and the macrophage scavenger receptor types I and II. Galectin-3 interacts with .beta.-galactoside residues of several cell surface and matrix glycoproteins through the carbohydrate recognition domain and is also capable of peptide-peptide assocns. mediated by its N-terminus domain. These structural properties enable galectin-3 to exert multiple functions, including the modulation of cell adhesion, the control of cell cycle, and the mRNA splicing activity. Moreover, in macrophages, astrocytes, and endothelial cells, galectin-3 has been shown to exhibit a high-affinity binding for AGEs; the lack of a transmembrane anchor sequence or signal peptide suggests that it assocs. with other AGE-receptor components rather than playing an independent role as AGE-receptor. In tissues that are targets of **diabetic** vascular complications, such as the mesangium and the endothelium, **galectin-3** is not expressed or only weakly expressed under basal conditions, at variance with p90 and p60 but becomes detectable with aging and is induced or up-regulated by the **diabetic** milieu, which only slightly affects the expression of p90 or p60. This (over)expression of galectin-3 may in turn modulate AGE-receptor-mediated events by modifying the function of the AGE-receptor complex, which could play a role in the pathogenesis of target tissue injury. Up-regulated galectin-3 expression may also exert direct effects

on tissue remodeling, independently of AGE ligands, by virtue of its adhesive and growth regulating properties.

REFERENCE COUNT: 90 THERE ARE 90 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 32 OF 72 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2000318002 EMBASE

TITLE: Role of galectin-3 as a receptor for advanced glycosylation end products.

AUTHOR: Pricci F.; Leto G.; Amadio L.; Iacobini C.; Romeo G.; Cordone S.; Gradini R.; Barsotti P.; Liu F.-T.; Di Mario U.; Pugliese G.

CORPORATE SOURCE: Dr. G. Pugliese, Diab., Endocrinology/Metabol. Found., Largo Marchiafava 1, 00161 Rome, Italy. demfound@tin.it

SOURCE: Kidney International, Supplement, (2000) 58/77 (S31-S39). Refs: 10
ISSN: 0098-6577 CODEN: KISUDF

COUNTRY: United States

DOCUMENT TYPE: Journal; General Review

FILE SEGMENT: 003 Endocrinology
028 Urology and Nephrology
029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

AB The advanced glycosylation end product (AGE)-binding proteins identified so far include the components of the AGE-receptor complex p60, p90 and **galectin-3**, receptor for advanced glycosylation end products (RAGE), and the macrophage scavenger receptor types I and II. **Galectin-3** interacts with .beta.-galactoside residues of several cell surface and matrix glycoproteins through the carbohydrate recognition domain and is also capable of peptide-peptide associations mediated by its N-terminus domain. These structural properties enable **galectin-3** to exert multiple functions, including the modulation of cell adhesion, the control of cell cycle, and the mRNA splicing activity. Moreover, in macrophages, astrocytes, and endothelial cells, **galectin-3** has been shown to exhibit a high-affinity binding for AGEs; the lack of a transmembrane anchor sequence or signal peptide suggests that it associates with other AGE-receptor components rather than playing an independent role as AGE-receptor. In tissues that are targets of **diabetic** vascular complications, such as the mesangium and the endothelium, **galectin-3** is not expressed or only weakly expressed under basal conditions, at variance with p90 and p60 but becomes detectable with aging and is induced or up-regulated by the **diabetic** milieu, which only slightly affects the expression of p90 or p60. This (over)expression of **galectin-3** may in turn modulate AGE-receptor-mediated events by modifying the function of the AGE-receptor complex, which could play a role in the pathogenesis of target tissue injury. Up-regulated **galectin-3** expression may also exert direct effects on tissue remodeling, independently of AGE ligands, by virtue of its adhesive and growth regulating properties.

L70 ANSWER 33 OF 72 Elsevier BIOBASE COPYRIGHT 2004 Elsevier Science B.V. on STN

ACCESSION NUMBER: 2000206492 ESBIOBASE

TITLE: Role of galectin-3 as a receptor for advanced glycosylation end products

AUTHOR: Pricci F.; Leto G.; Amadio L.; Iacobini C.; Romeo G.; Cordone S.; Gradini R.; Barsotti P.; Liu F.-T.; Di Mario U.; Pugliese G.

CORPORATE SOURCE: Dr. G. Pugliese, Diab., Endocrinology/Metabol. Found., Largo Marchiafava 1, 00161 Rome, Italy.
E-mail: demfound@tin.it

SOURCE: Kidney International, Supplement, (2000), 58/77

(S31-S39), 10 reference(s)
CODEN: KISUDF ISSN: 0098-6577
DOCUMENT TYPE: Journal; General Review
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The advanced glycosylation end product (AGE)-binding proteins identified so far include the components of the AGE-receptor complex p60, p90 and **galectin-3**, receptor for advanced glycosylation end products (RAGE), and the macrophage scavenger receptor types I and II. **Galectin-3** interacts with .beta.-galactoside residues of several cell surface and matrix glycoproteins through the carbohydrate recognition domain and is also capable of peptide-peptide associations mediated by its N-terminus domain. These structural properties enable **galectin-3** to exert multiple functions, including the modulation of cell adhesion, the control of cell cycle, and the mRNA splicing activity. Moreover, in macrophages, astrocytes, and endothelial cells, **galectin-3** has been shown to exhibit a high-affinity binding for AGEs; the lack of a transmembrane anchor sequence or signal peptide suggests that it associates with other AGE-receptor components rather than playing an independent role as AGE-receptor. In tissues that are targets of **diabetic** vascular complications, such as the mesangium and the endothelium, **galectin-3** is not expressed or only weakly expressed under basal conditions, at variance with p90 and p60 but becomes detectable with aging and is induced or up-regulated by the **diabetic** milieu, which only slightly affects the expression of p90 or p60. This (over)expression of **galectin-3** may in turn modulate AGE-receptor-mediated events by modifying the function of the AGE-receptor complex, which could play a role in the pathogenesis of target tissue injury. Up-regulated **galectin-3** expression may also exert direct effects on tissue remodeling, independently of AGE ligands, by virtue of its adhesive and growth regulating properties.

L70 ANSWER 34 OF 72 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 2000:667788 SCISEARCH
THE GENUINE ARTICLE: 348PV
TITLE: Role of galectin-3 as a receptor for advanced glycosylation end products
AUTHOR: Pricci F; Leto G; Amadio L; Iacobini C; Romeo G; Cordone S; Gradini R; Barsotti P; Liu F T; DiMario U; Pugliese G (Reprint)
CORPORATE SOURCE: DIABET ENDOCRINOL & METAB FDN, LARGO MARCHIAFAVA 1, I-00161 ROME, ITALY (Reprint); UNIV ROMA LA SAPIENZA, DEPT CLIN SCI, DIV ENDOCRINOL, ROME, ITALY; UNIV ROMA LA SAPIENZA, DEPT EXPT MED & PATHOL, DIV GEN PATHOL, ROME, ITALY; UNIV ROMA LA SAPIENZA, DEPT EXPT MED & PATHOL, DIV ANAT PATHOL, ROME, ITALY; LA JOLLA INST ALLERGY & IMMUNOL, SAN DIEGO, CA
COUNTRY OF AUTHOR: ITALY; USA
SOURCE: KIDNEY INTERNATIONAL, (SEP 2000) Vol. 58, Supp. [77], pp. S31-S39.
Publisher: BLACKWELL SCIENCE INC, 350 MAIN ST, MALDEN, MA 02148.
ISSN: 0085-2538.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 90

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The advanced glycosylation end product (AGE)binding proteins identified so far include the components of the AGE-receptor complex p60, p90 and **galectin-3**, receptor for advanced glycosylation end products (RAGE), and the macrophage scavenger receptor types I and II.

Galectin-3 interacts with beta-galactoside residues of several cell surface and matrix glycoproteins through the carbohydrate recognition domain and is also capable of peptide-peptide associations mediated by its N-terminus domain. These structural properties enable **galectin-3** to exert multiple functions, including the modulation of cell adhesion, the control of cell cycle, and the mRNA splicing activity. Moreover, in macrophages, astrocytes, and endothelial cells, **galectin-3** has been shown to exhibit a high-affinity binding for AGEs; the lack of a transmembrane anchor sequence or signal peptide suggests that it associates with other AGE-receptor components rather than playing an independent role as AGE-receptor. In tissues that are targets of **diabetic** vascular complications, such as the mesangium and the endothelium, **galectin-3** is not expressed or only weakly expressed under basal conditions, at variance with p90 and p60 but becomes detectable with aging and is induced or upregulated by the **diabetic** milieu, which only slightly affects the expression of p90 or p60. This (over)expression of **galectin-3** may in turn modulate AGE-receptor-mediated events by modifying the function of the AGE-receptor complex, which could play a role in the pathogenesis of target tissue injury. Up-regulated **galectin-3** expression may also exert direct effects on tissue remodeling, independently of AGE ligands, by virtue of its adhesive and growth regulating properties.

L70 ANSWER 35 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2000:442635 BIOSIS
DOCUMENT NUMBER: PREV200000442635
TITLE: Role of galectin-3 as a receptor for advanced glycosylation end products.
AUTHOR(S): Pricci, Flavia; Leto, Gaetano; Amadio, Lorena; Iacobini, Carla; Romeo, Giulio; Cordone, Samantha; Gradini, Roberto; Barsotti, Paola; Liu, Fu-Tong; Di Mario, Umberto; Pugliese, Giuseppe [Reprint author]
CORPORATE SOURCE: Diabetes, Endocrinology and Metabolism Foundation, Largo Marchiafava 1, 00161, Rome, Italy
SOURCE: Kidney International Supplement, (September, 2000) No. 77, pp. S.31-S.39. print.
CODEN: KISUDF. ISSN: 0098-6577.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 18 Oct 2000
Last Updated on STN: 10 Jan 2002

AB The advanced glycosylation end product (AGE)-binding proteins identified so far include the components of the AGE-receptor complex p60, p90 and galectin-3, receptor for advanced glycosylation end products (RAGE), and the macrophage scavenger receptor types I and II. Galectin-3 interacts with beta-galactoside residues of several cell surface and matrix glycoproteins through the carbohydrate recognition domain and is also capable of peptide-peptide associations mediated by its N-terminus domain. These structural properties enable galectin-3 to exert multiple functions, including the modulation of cell adhesion, the control of cell cycle, and the mRNA splicing activity. Moreover, in macrophages, astrocytes, and endothelial cells, galectin-3 has been shown to exhibit a high-affinity binding for AGEs; the lack of a transmembrane anchor sequence or signal peptide suggests that it associates with other AGE-receptor components rather than playing an independent role as AGE-receptor. In tissues that are targets of **diabetic** vascular complications, such as the mesangium and the endothelium, **galectin-3** is not expressed or only weakly expressed under basal conditions, at variance with p90 and p60 but becomes detectable with aging and is induced or up-regulated by the **diabetic** milieu, which only slightly affects the expression of p90 or p60. This (over)expression of galectin-3 may in turn modulate AGE-receptor-mediated events by modifying the function of the AGE-receptor complex, which could play a role in the pathogenesis of target tissue injury. Up-regulated galectin-3 expression may also exert

direct effects on tissue remodeling, independently of AGE ligands, by virtue of its adhesive and growth regulating properties.

L70 ANSWER 36 OF 72 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 1999:902774 SCISEARCH
THE GENUINE ARTICLE: 241JQ
TITLE: Promoter sequence studies of the LGALS3 (**galectin -3**) gene in insulin-dependent **diabetes** mellitus.
AUTHOR: Larsen Z (Reprint); Kristiansen O P; Johannesen J; Nerup J; Pociot F
CORPORATE SOURCE: STENO DIABET CTR, DK-2820 GENTOFTE, DENMARK
COUNTRY OF AUTHOR: DENMARK
SOURCE: AMERICAN JOURNAL OF HUMAN GENETICS, (OCT 1999) Vol. 65, No. 4, Supp. [S], pp. 1441-1441.
Publisher: UNIV CHICAGO PRESS, 5720 SOUTH WOODLAWN AVE, CHICAGO, IL 60637-1603.
ISSN: 0002-9297.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 0

L70 ANSWER 37 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1999:497633 BIOSIS
DOCUMENT NUMBER: PREV199900497633
TITLE: Promoter sequence studies of the LGALS3 (**galectin -3**) gene in insulin-dependent **diabetes** mellitus.
AUTHOR(S): Larsen, Z. [Reprint author]; Kristiansen, O. P. [Reprint author]; Johannesen, J. [Reprint author]; Nerup, J. [Reprint author]; Pociot, F. [Reprint author]
CORPORATE SOURCE: Steno Diabetes Center, Gentofte, Denmark
SOURCE: American Journal of Human Genetics, (Oct., 1999) Vol. 65, No. 4, pp. A258. print.
Meeting Info.: 49th Annual Meeting of the American Society of Human Genetics. San Francisco, California, USA. October 19-23, 1999. The American Society of Human Genetics.
CODEN: AJHGAG. ISSN: 0002-9297.
DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 23 Nov 1999
Last Updated on STN: 23 Nov 1999

L70 ANSWER 38 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 14
ACCESSION NUMBER: 1998:435700 CAPLUS
DOCUMENT NUMBER: 129:51718
TITLE: Diagnostic method for evaluating advanced glycosylation endproducts using Mac-2 receptor
INVENTOR(S): Imani, Farhad; Vlassara, Helen; Cerami, Anthony
PATENT ASSIGNEE(S): Picower Institute for Medical Research, USA
SOURCE: U.S., 18 pp., Cont.-in-part of U. S. 5,316,754.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 33
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5766856	A	19980616	US 1994-234817	19940428
EP 322402	A2	19890628	EP 1989-102406	19850319
EP 322402	A3	19891025		
EP 322402	B1	19931124		

R: AT, BE, CH, DE, FR, GB, LI, LU, NL, SE

AT	97741	E	19931215	AT 1989-102406	19850319
CA	1323565	A1	19931026	CA 1987-546737	19870911
US	5126442	A	19920630	US 1991-638735	19910108
US	5202424	A	19930413	US 1991-749444	19910823
US	5254593	A	19931019	US 1991-807609	19911216
JP	05172813	A2	19930713	JP 1992-51657	19920310
WO	9313775	A1	19930722	WO 1993-US386	19930115

W: AU, CA, JP
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU	9335840	A1	19930803	AU 1993-35840	19930115
US	5316754	A	19940531	US 1993-10268	19930128
WO	9529692	A1	19951109	WO 1995-US5263	19950427

W: CA, JP, MX, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

US	35465	E	19970225	US 1995-437064	19950509
US	5811075	A	19980922	US 1995-487398	19950607

PRIORITY APPLN. INFO.:

US	1984-590820	A2 19840319
US	1985-798032	A2 19851114
US	1986-907747	B2 19860912
US	1987-91534	A3 19870903
US	1989-453958	B2 19891220
US	1991-749444	A3 19910823
US	1993-10268	A2 19930128
EP	1989-102406	A 19850319
US	1988-220504	B2 19880718
US	1989-453935	A3 19891220
US	1990-481869	A2 19900220
US	1990-606425	A3 19901031
US	1991-709487	B1 19910603
US	1992-822310	A 19920117
US	1992-878837	B1 19920505
WO	1993-US386	A 19930115
US	1993-162840	B1 19931203
US	1994-234817	A 19940428
US	1994-290680	B1 19940815

AB Sol. and membrane assocd. forms of Mac-2 (also termed Carbohydrate Binding Protein [CBP]-35 and L-34) recognizes and binds to Advanced Glycosylation Endproducts (AGEs) with higher affinity than it binds carbohydrates, such as its "natural" ligand, galactose. The level of sol. Mac-2 in plasma or serum provides a prognostic indicator of the susceptibility of an individual to AGE complications. Thus, the present invention includes various therapeutic and diagnostic utilities predicated on the identification and activities of Mac-2 for binding AGEs. Pharmaceutical compns. of the invention comprise an effective amt. of Mac-2 admixed with a pharmaceutically acceptable carrier. Diagnostic utilities include assays such as immunoassays for the presence and amt. of Mac-2 in a biol. sample, e.g., serum or plasma. Such assays can be performed with labeled receptors, antibodies, ligands and other binding partners of Mac-2. The invention further provides screening assays to evaluate new drugs by their ability to promote or inhibit Mac-2 prodn. or activity, as desired. The above assays can be used to detect the presence or activity of invasive stimuli, pathol. or injury, the presence or absence of which may affect the structure or function of specific organs. In a specific embodiment, the level of sol. **Mac-2** varies between different populations of **diabetics**, and between **diabetics** and normals.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L70 ANSWER 39 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:324881 CAPLUS
DOCUMENT NUMBER: 129:39786
TITLE: Diabetes-mediating proteins and their therapeutic uses
INVENTOR(S): Mose, Larsen Peter; Fey, Stephen J.; Nerup, Jorn;

Karlsen, Allan E.; Bjerre, Christensen Ulla; Pociot, Flemming; Andersen, Henrik U.
PATENT ASSIGNEE(S): Mose Larsen, Peter, Den.; Fey, Stephen J.; Nerup, Jorn; Karlsen, Allan E.; Bjerre Christensen, Ulla; Pociot, Flemming; Andersen, Henrik U.
SOURCE: PCT Int. Appl., 145 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9820124	A2	19980514	WO 1997-IB1627	19971024
WO 9820124	A3	19981008		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
WO 9811508	A1	19980319	WO 1997-IB1114	19970916
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC				
JP 2001500614	T2	20010116	JP 1998-513441	19970916
AU 9854070	A1	19980529	AU 1998-54070	19971024
EP 934409	A2	19990811	EP 1997-947839	19971024
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001503860	T2	20010321	JP 1998-520234	19971024
JP 2002504806	T2	20020212	JP 1998-521182	19971024
KR 2000052802	A	20000825	KR 1999-703621	19990424
US 6611766	B1	20030826	US 1999-297034	19990621
US 6640000	B1	20031028	US 1999-254675	19990621

PRIORITY APPLN. INFO.:

US 1996-29324P	P	19961025
US 1996-30088P	P	19961105
US 1996-30186P	P	19961105
US 1997-897098	A2	19970718
US 1996-31291P	P	19960916
US 1996-29325P	P	19961025
WO 1997-IB1114	W	19970916
WO 1997-IB1337	W	19971024
WO 1997-IB1627	W	19971024

AB Protective and deleterious diabetes-mediating proteins involved in the development of diabetes or in the prevention of diabetes development are identified by differential expression during during development of diabetes relative to expression in the absence of diabetes development. These proteins are referred to by their position on 10% IEF or NEPHGE 2-dimensional gels. The purified diabetes-mediating proteins are characterized by mol. wt., isoelec. point, and mass spectroscopic characteristics. Galectin-3 (rat and human) and mortalin (mouse and human), two of the identified proteins from pancreatic islets, were also sequenced. Transgenic animals expressing a diabetes-mediating protein, drug screening methods for identifying a test compd. capable of altering the expression of a diabetes-mediating protein, and methods of preventing or ameliorating diabetes by administering a compd. capable of altering the expression of a diabetes-mediating protein are also provided..

L70 ANSWER 40 OF 72 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 1998:910289 SCISEARCH
THE GENUINE ARTICLE: 141VC
TITLE: Cell activation by glycated proteins. AGE receptors, receptor recognition factors and functional classification of AGEs
AUTHOR: Thornalley P J (Reprint)
CORPORATE SOURCE: UNIV ESSEX, DEPT BIOL SCI, CENT CAMPUS, WIVENHOE PK, COLCHESTER CO4 3SQ, ESSEX, ENGLAND (Reprint)
COUNTRY OF AUTHOR: ENGLAND
SOURCE: CELLULAR AND MOLECULAR BIOLOGY, (NOV 1998) Vol. 44, No. 7, pp. 1013-1023.
Publisher: CELLULAR & MOLECULAR BIOLOGY, PROF R WEGMANN RESIDENCE HAUSSMANN 1 AVENUE DU PAVE NEUF, 93160 NOISY-LE-GRAND, FRANCE.
ISSN: 0145-5680.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 72
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Proteins modified by advanced glycation endproducts (AGE) bind to cell surface receptors and other AGE binding proteins. AGE-binding receptors are: scavenger receptors types I and II, the receptor for advanced glycation endproducts (RAGE), oligosaccharyl transferase-48 (OST-48, AGE-Ri), 80K-H phosphoprotein (AGE-R2) and **galectin-3** (AGE-R3). AGE receptors are found in monocytes, macrophages, endothelial cells, pericytes, podocytes, astrocytes and microglia. AGE-modified proteins also bind to lysozyme and lactoferrin. A critical review of the evidence for receptors binding AGE-modified protein binding in vivo is presented. Scavenger receptors have only been shown to bind proteins modified by AGE to a much higher extent than found in vivo. 80K-H phosphoprotein is involved in FGFR3 signal transduction to MAP kinase, and may be involved in AGE-receptor signal transduction. Whether all of these proteins bind AGE-modified proteins in vivo is not yet clear. Cell activation in response to AGE-modified proteins is associated with increased expression of extracellular matrix proteins, vascular adhesion molecules, cytokines and growth factors. Depending on the cell type and concurrent signaling, this is associated with chemotaxis, angiogenesis, oxidative stress, cell proliferation or programmed cell death (PCD). Receptor recognition factors for agonism at the AGE receptor-have been little studied but to date hydroimidazolones appear to be the most likely candidates. Pharmacologic inhibition of AGE receptor-mediated cell activation with specific antagonists may provide the basis for therapeutic intervention in diseases where AGE accumulation is a suspected etiological factor vascular complications of **diabetes**, macrovascular disease, renal insufficiency and Alzheimer's disease.

L70 ANSWER 41 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1999:19779 BIOSIS
DOCUMENT NUMBER: PREV199900019779
TITLE: **Diabetic** glomerulosclerosis in **galectin -3** knockout mice.
AUTHOR(S): Barsotti, Paola [Reprint author]; Pricci, Flavia; Leto, Gaetano; Liu, Fu-Tong; Di Mario, Umberto; Pugliese, Giuseppe
CORPORATE SOURCE: Univ. Roma "La Sapienza", Roma, Italy
SOURCE: Journal of the American Society of Nephrology, (Sept., 1998) Vol. 9, No. PROGRAM AND ABSTR. ISSUE, pp. 628A. print.
Meeting Info.: 31st Annual Meeting of the American Society of Nephrology. Philadelphia, Pennsylvania, USA. October 25-28, 1998. American Society of Nephrology.
CODEN: JASNEU. ISSN: 1046-6673.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Jan 1999
Last Updated on STN: 20 Jan 1999

L70 ANSWER 42 OF 72 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 1998:749855 SCISEARCH
THE GENUINE ARTICLE: 109ZG
TITLE: Induction of glomerular mesangial **galectin-3** age-receptor-3 expression by the **diabetic** milieu
AUTHOR: Leto G (Reprint); Pricci F; Romeo G; Catalano S; Amadio L; DiazHorta O; Sale P; Gradini R; Lenti L; Barsotti P; Frigeri L; DiMario U; Pugliese G
CORPORATE SOURCE: UNIV ROMA LA SAPIENZA, ROME, ITALY; SCRIPPS INST, LA JOLLA, CA
COUNTRY OF AUTHOR: ITALY; USA
SOURCE: DIABETOLOGIA, (AUG 1998) Vol. 41, Supp. [1], pp. 98-98. Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.
ISSN: 0012-186X.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 0

L70 ANSWER 43 OF 72 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 1998:749853 SCISEARCH
THE GENUINE ARTICLE: 109ZG
TITLE: Accelerated **diabetic** glomerulopathy in **galectin-3**/age-receptor-3 knockout mice
AUTHOR: Pugliese G (Reprint); Pricci F; Leto G; Romeo G; Amadio L; Catalano S; Hsu D; Barsotti P; Albanese E; Cordone S; Frigeri L; Liu F T; DiMario U
CORPORATE SOURCE: UNIV ROMA LA SAPIENZA, ROME, ITALY; UNIV CALIF SAN DIEGO, LA JOLLA INST ALLERGY & IMMUNOL, SAN DIEGO, CA 92103; UNIV CALIF SAN DIEGO, SCRIPPS INST, SAN DIEGO, CA 92103
COUNTRY OF AUTHOR: ITALY; USA
SOURCE: DIABETOLOGIA, (AUG 1998) Vol. 41, Supp. [1], pp. 97-97. Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.
ISSN: 0012-186X.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 0

L70 ANSWER 44 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1998:424371 BIOSIS
DOCUMENT NUMBER: PREV199800424371
TITLE: Accelerated **diabetic** glomerulopathy in **galectin-3**/age-receptor-3 knockout mice.
AUTHOR(S): Pugliese, G. [Reprint author]; Pricci, F. [Reprint author]; Leto, G. [Reprint author]; Romeo, G. [Reprint author]; Amadio, L. [Reprint author]; Catalano, S. [Reprint author]; Hsu, D.; Barsotti, P. [Reprint author]; Albanese, E. [Reprint author]; Cordone, S. [Reprint author]; Frigeri, L.; Liu, F.-T.; Dimario, U. [Reprint author]
CORPORATE SOURCE: Univ. Rome "La Sapienza", Rome, Italy
SOURCE: Diabetologia, (Aug., 1998) Vol. 41, No. SUPPL. 1, pp. A27. print.
Meeting Info.: 34th Annual Meeting of the European Association for the Study of Diabetes. Barcelona, Spain. September 11, 1998. European Association for the Study of

Diabetes.
CODEN: DBTGAJ. ISSN: 0012-186X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Oct 1998
Last Updated on STN: 2 Oct 1998

L70 ANSWER 45 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1998:424372 BIOSIS
DOCUMENT NUMBER: PREV199800424372
TITLE: Induction of glomerular/mesangial **galectin-3**/age-receptor-3 expression by the **diabetic** milieu.
AUTHOR(S): Leto, G. [Reprint author]; Pricci, F. [Reprint author]; Romeo, G. [Reprint author]; Catalano, S. [Reprint author]; Amadio, L. [Reprint author]; Diaz-Horta, O. [Reprint author]; Sale, P. [Reprint author]; Gradini, R. [Reprint author]; Lenti, L. [Reprint author]; Barsotti, P. [Reprint author]; Frigeri, L.; Dimario, U. [Reprint author]; Pugliese, G. [Reprint author]
CORPORATE SOURCE: "La Sapienza" Univ., Rome, Italy
SOURCE: Diabetologia, (Aug., 1998) Vol. 41, No. SUPPL. 1, pp. A27. print.
Meeting Info.: 34th Annual Meeting of the European Association for the Study of Diabetes. Barcelona, Spain. September 11, 1998. European Association for the Study of Diabetes.
CODEN: DBTGAJ. ISSN: 0012-186X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Oct 1998
Last Updated on STN: 2 Oct 1998

L70 ANSWER 46 OF 72 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 97:638332 SCISEARCH
THE GENUINE ARTICLE: XG123
TITLE: Modulation of **galectin-3** /AGE-receptor-3 expression by the **diabetic** milieu in cultured rat mesangial cells
AUTHOR: Pugliese G (Reprint); Pricci F; Romeo G; Leto G; Gradini R; Santangelo C; Lenti L; Cirulli V; Hayek A; Liu F T; Frigeri L; DiMario U
CORPORATE SOURCE: UNIV ROMA LA SAPIENZA, ROME, ITALY; UNIV RC CATANZARO, CATANZARO, ITALY; UCSD, WHITTIER INST, LA JOLLA, CA 92093
COUNTRY OF AUTHOR: ITALY; USA
SOURCE: DIABETOLOGIA, (JUN 1997) Vol. 40, Supp. [1], pp. 1998-1998

Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.
ISSN: 0012-186X.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 0

L70 ANSWER 47 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1997:372276 BIOSIS
DOCUMENT NUMBER: PREV199799671479
TITLE: Modulation of **Galectin-3**/age-receptor-3 expression by the **diabetic** milieu in cultured rat mesangial cells.
AUTHOR(S): Pugliese, G. [Reprint author]; Pricci, F.; Romeo, G.; Leto, G.; Gradini, R.; Santangelo, C.; Lenti, L.; Cirulli, V.;

Hayek, A.; Liu, F. T.; Frigeri, L.; Di Mario, U.
CORPORATE SOURCE: Univ. Rome La Sapienza, Italy
SOURCE: Diabetologia, (1997) Vol. 40, No. SUPPL. 1, pp. A508.
Meeting Info.: 16th International Diabetes Federation Congress. Helsinki, Finland. July 20-25, 1997.
CODEN: DBTGAJ. ISSN: 0012-186X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 4 Sep 1997
Last Updated on STN: 4 Sep 1997

L70 ANSWER 48 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 15
ACCESSION NUMBER: 1996:64937 CAPLUS
DOCUMENT NUMBER: 124:106696
TITLE: An advanced glycosylation end product (AGE) receptor, and diagnostic and therapeutic methods based thereon
INVENTOR(S): Imani, Farhad; Vlassara, Helen; Cerami, Anthony
PATENT ASSIGNEE(S): Picower Institute for Medical Research, USA
SOURCE: PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 33
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9529692	A1	19951109	WO 1995-US5263	19950427
W: CA, JP, MX, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5126442	A	19920630	US 1991-638735	19910108
WO 9313775	A1	19930722	WO 1993-US386	19930115
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9335840	A1	19930803	AU 1993-35840	19930115
US 5766856	A	19980616	US 1994-234817	19940428

PRIORITY APPLN. INFO.:

US 1994-234817	A	19940428
US 1984-590820	A2	19840319
US 1985-798032	A2	19851114
US 1986-907747	B2	19860912
US 1987-91534	A3	19870903
US 1989-453935	A3	19891220
US 1989-453958	B2	19891220
US 1991-749444	A3	19910823
US 1992-822310	A	19920117
WO 1993-US386	A	19930115
US 1993-10268	A2	19930128

AB A binding partner to advanced glycosylation end products (AGEs) has been identified and further characterized. The particular receptor in this instance is the lectin MAC-2, which has been found to bind to AGEs with a higher affinity than to carbohydrates such as its "natural" ligand, galactose. The level of sol. MAC-2 appears to vary in a manner which commends the use of MAC-2 as a prognostic indicator of susceptibility to complications stemming from the presence and accumulation of advanced glycosylation end products. Both diagnostic and therapeutic uses of this AGE receptor are disclosed, as are pharmaceutical compns. contg. the receptor or active portions thereof, for use in treating disorders attributable to the presence and/or accumulation of advanced glycosylation end products. Binding of a putative **Mac-2** protein with 125I-AGE-BSA in samples from both type-I and type-II **diabetics** was much greater than in samples from normal controls.

L70 ANSWER 49 OF 72 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 16

ACCESSION NUMBER: 1995:944605 CAPLUS
DOCUMENT NUMBER: 124:83769
TITLE: Identification of galectin-3 as a high-affinity binding protein for advanced glycation end products (AGE): a new member of the AGE-receptor complex
AUTHOR(S): Vlassara, Helen; Li, Yong Ming; Imani, Farhad; Wojciechowicz, Donald; Yang, Zhi; Liu, Fu-Tong; Cerami, Anthony
CORPORATE SOURCE: Picower Institute for Medical Research, Manhasset, NY, USA
SOURCE: Molecular Medicine (Cambridge, Massachusetts) (1995), 1(6), 634-46
CODEN: MOMEF3; ISSN: 1076-1551
PUBLISHER: Blackwell
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Advanced glycation end products (AGE), the reactive derivs. of nonenzymic glucose-protein condensation reactions, are implicated in the multiorgan complications of diabetes and aging. An AGE-specific cellular receptor complex (AGE-R) mediating AGE removal as well as multiple biol. responses has been identified. By screening an expression library using antibody against a previously identified component of the AGE-R complex p90, a known partial cDNA clone was isolated with homol. to galectin-3, a protein of diverse identity, and member of the galectin family. To explore this finding, the nature of the interactions between galectin-3 and AGE was studied using intact macrophage-like RAW 264.7 cells, membrane-assocd. and recombinant galectin-1 through -4, and model AGE-ligands (AGE-BSA, FFI-BSA). Among the members of this family (galectin-1 through 4), recombinant rat galectin-3 was found to exhibit high-affinity 125I-AGE-BSA binding with saturable kinetics (kD 3.5.times.107 M-1) that was fully blocked by excess unlabeled naturally formed AGE-BSA or synthetic FFI-BSA, but only weakly inhibited by several known galectin-3 ligands, such as lactose. In addn. to the p90, immunopptn. with anti-galectin-3, followed by 125I-AGE-BSA ligand blot anal. of RAW 264.7 cell exts., revealed galectin-3 (28 and 32 kDa), as well as galectin-3-assocd. proteins (40 and 50 kDa) with AGE-binding activity. Interaction of galectin-3 with AGE-BSA or FFI-BSA resulted in formation of SDS-, and .beta.-mercaptoethanol-insol., but hydroxylamine-sensitive high-mol. wt. complexes between AGE-ligand, galectin-3, and other membrane components. The findings point toward a mechanism by which galectin-3 may serve in the assembly of AGE-R components and in the efficient cell surface attachment and endocytosis by macrophages of a heterogeneous pool of AGE moieties with diverse affinities, thus contributing to the elimination of these pathogenic substances.

L70 ANSWER 50 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1994:334564 BIOSIS
DOCUMENT NUMBER: PREV199497347564
TITLE: Serum **Mac-2** or **carbohydrate binding protein-35** (CBP) binds glycated proteins and is elevated in **diabetic** sera.
AUTHOR(S): Imani, Farhad [Reprint author]; Wojciechowicz, Donald; Creager, Mark; Greenidge, Judy; Cerami, Anthony; Vlassara, Helen
CORPORATE SOURCE: Picower Inst. Med. Res., Manhasset, NY 11030, USA
SOURCE: FASEB Journal, (1994) Vol. 8, No. 7, pp. A1385.
Meeting Info.: 85th Annual Meeting of the American Society for Biochemistry and Molecular Biology. Washington, D.C., USA. May 21-25, 1994.
CODEN: FAJOEC. ISSN: 0892-6638.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Aug 1994

Last Updated on STN: 2 Aug 1994

L70 ANSWER 51 OF 72 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 94:265931 SCISEARCH
THE GENUINE ARTICLE: NH516
TITLE: SERUM **MAC-2** OR **CARBOHYDRATE-BINDING PROTEIN-35** (CBP) BINDS GLYCATED PROTEINS AND IS ELEVATED IN **DIABETIC** SERA
AUTHOR: IMANI F (Reprint); WOJCIECHOWICZ D; CREAGER M; GREENIDGE J; CERAMI A; VLASSARA H
CORPORATE SOURCE: PICOWER INST MED RES, MANHASSET, NY, 11030; BRIGHAM & WOMENS HOSP, BOSTON, MA, 02115
COUNTRY OF AUTHOR: USA
SOURCE: FASEB JOURNAL, (19 APR 1994) Vol. 8, No. 7, pp. A1385. ISSN: 0892-6638.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: No References

L70 ANSWER 52 OF 72 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 17
ACCESSION NUMBER: 94247460 EMBASE
DOCUMENT NUMBER: 1994247460
TITLE: Changed distribution and immune effects of nickel augment viral-induced inflammatory heart lesions in mice.
AUTHOR: Ilback N.-G.; Fohlman J.; Friman G.
CORPORATE SOURCE: Toxicology and Safety Assessment, Kabi Pharmacia AB, P.O. Box 941,S-251 09 Helsingborg, Sweden
SOURCE: Toxicology, (1994) 91/2 (203-219). ISSN: 0300-483X CODEN: TXCYAC
COUNTRY: Ireland
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
005 General Pathology and Pathological Anatomy
018 Cardiovascular Diseases and Cardiovascular Surgery
026 Immunology, Serology and Transplantation
046 Environmental Health and Pollution Control
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB We have used the myocarditic coxsackievirus B3 (CB3) infection in Balb/c mice to investigate immunotoxic effects of a ten-week low-dose (0.002 M) administration of nickel chloride (NiCl2) prior to infection. This dose did not influence CB3-induced mortality. Whole-body autoradiography of [63Ni] during the disease showed the pancreas, lungs and myocardium to be new target organs in this disease. Seven days after the inoculation, impulse counting of these organs showed the infection-induced increase of [63Ni] to be 5-fold ($P < 0.01$) in the pancreas, 2.2-fold ($P < 0.05$) in the lungs and 1.3-fold ($P < 0.05$) in the heart. Nickel tended to increase spleen B- and T-cell activities, but thymocyte activity was unaffected. The activity of spleen natural killer (NK) cells decreased by 30% ($P < 0.05$), whereas blood-cell activity in fact increased by 51% ($P < 0.05$). The inflammatory and necrotic lesions in the ventricular myocardium seven days after the inoculation covered 3.31% of the tissue section area in infected control mice. This damage was increased by 43% (to 4.74% of the tissue section area) in nickel-treated mice. The response pattern of lymphocyte subsets in situ in myocardial inflammatory lesions was elucidated by an immune histochemical staining technique. The number of cytotoxic T-cells, helper T-cells and **Mac 2**+ cells (macrophages) in these lesions decreased by 46% ($P < 0.05$), 41% ($P < 0.05$) and 27% (not significant), respectively, with the nickel treatment. The number of helper T-cells was negatively correlated to the size of the inflammatory area ($r = -0.529$, $P < 0.02$). The results indicate that nickel

may contribute to the progression of target organ pathology in infection-induced diseases of an autoimmune and/or inflammatory character, such as **diabetes** and myocarditis.

L70 ANSWER 53 OF 72 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 18

ACCESSION NUMBER: 92028025 EMBASE
DOCUMENT NUMBER: 1992028025
TITLE: Direct involvement of macrophages in destruction of .beta.-cells leading to development of diabetes in virus-infected mice.
AUTHOR: Baek H.-S.; Yoon J.-W.
CORPORATE SOURCE: J. McFarlane Diab. Res. Center, Faculty of Medicine, University of Calgary, 3330 Hospital Drive N.W.,Calgary, Alta., Canada
SOURCE: Diabetes, (1991) 40/12 (1586-1597).
ISSN: 0012-1797 CODEN: DIAEAZ
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB A single administration of complete Freund's adjuvant (CFA), type 1 carrageenan (Car), or silica 7, 2, and 2 days, respectively, before infection with a low dose (1 x 102 plaque-forming units/mouse) of encephalomyocarditis D (EMC-D) virus resulted in a significant increase in the incidence of **diabetes** in SJL/J mice (100%) compared with untreated EMC-D virus-infected mice (40%). Peritoneal macrophages were isolated from uninfected SJL/J mice, which had been treated once with silica, and transferred into SJL/J mice 2 days before low-dose EMC-D infection. Approximately 90% of the mice became **diabetic**, whereas 30% of mice that received virus alone became **diabetic**. The depletion of macrophages by treatment with the combined anti-Mac-1 and anti- **Mac-2** monoclonal antibodies after a single administration of CFA, Car, or silica resulted in almost complete prevention of .beta.-cell destruction in EMC-D virus-infected mice. Furthermore, none of the mice in which macrophages were depleted by long-term treatment with silica and 10% of the mice treated with Car before virus infection became **diabetic**. On the basis of these observations, we conclude that macrophages are directly involved in the destruction of .beta.-cells, leading to the development of clinical **diabetes** in EMC-D virus-infected mice.

L70 ANSWER 54 OF 72 CANCERLIT on STN DUPLICATE 19

ACCESSION NUMBER: 92005730 CANCERLIT
DOCUMENT NUMBER: 92005730 PubMed ID: 1833072
TITLE: Possible mechanism of the preventive effect of BCG against diabetes mellitus in NOD mouse. I. Generation of suppressor macrophages in spleen cells of BCG-vaccinated mice.
AUTHOR: Yagi H; Matsumoto M; Suzuki S; Misaki R; Suzuki R; Makino S; Harada M
CORPORATE SOURCE: Shionogi Research Laboratories, Shionogi & Company, Ltd., Osaka, Japan.
SOURCE: CELLULAR IMMUNOLOGY, (1991 Nov) 138 (1) 130-41.
Journal code: 1246405. ISSN: 0008-8749.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: MEDLINE; Priority Journals
OTHER SOURCE: MEDLINE 92005730
ENTRY MONTH: 199111
ENTRY DATE: Entered STN: 19990618
Last Updated on STN: 19990618

AB With the aim of clarifying the mechanism of the suppressive action of BCG

against insulitis and overt **diabetes** in NOD mice, we studied the effects of BCG on spleen cell populations and on the in vitro immune responses of spleen cells. The spleen cells of BCG-vaccinated mice showed much lower responsiveness to various mitogens such as Con A, PHA, PWM, and LPS than those of saline-treated mice. Low responsiveness to alloantigens was also observed. Flow cytometric analysis of the spleen cells revealed that Mac-1+ and **Mac-2**+ cells had increased while T and B cells had decreased in the BCG-vaccinated mice compared with the saline-treated mice at the time when the maximum level of inhibition of mitogen responses of BCG-vaccinated mice was observed. This suggests that the decreased in vitro immune response was due to the increase in macrophages which suppress lymphocyte functions. Support for this interpretation comes from the following two findings: (1) the restoration of mitogen responses of spleen cells when macrophages were eliminated by plastic adhesion or FACS sorting and (2) resuppression of PHA and Con A responses of plastic-nonadherent spleen cells by addition of adherent cells or flow cytometrically sorted Mac-1+ cells obtained from BCG-vaccinated mice. These results indicate the generation of suppressor macrophages after BCG vaccination and suggest that these macrophages prevent the autoimmune pathogenesis leading to **diabetes** in NOD mice.

L70 ANSWER 55 OF 72 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 20

ACCESSION NUMBER: 1991:49528 BIOSIS
DOCUMENT NUMBER: PREV199191027809; BA91:27809
TITLE: ROLE OF MACROPHAGES IN THE PATHOGENESIS OF ENCEPHALOMYOCARDITIS VIRUS-INDUCED DIABETES IN MICE.
AUTHOR(S): BAEK H-S [Reprint author]; YOON J-W
CORPORATE SOURCE: DIV OF VIROL, DEP OF MICROBIOL AND INFECTIOUS DISEASES, UNIV OF CALGARY, 3330 HOSP DRIVE NW, CALGARY, ALBERTA T2N 4N1, CANADA
SOURCE: Journal of Virology, (1990) Vol. 64, No. 12, pp. 5708-5715. CODEN: JOVIAM. ISSN: 0022-538X.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 10 Jan 1991
Last Updated on STN: 10 Jan 1991

AB Pancreatic islets from SJL/J mice infected with the D variant of encephalomyocarditis virus (EMC-D virus) showed lymphocytic infiltration with moderate to severe destruction of beta cells. Immunohistochemical staining of the islet sections with several monoclonal antibodies, anti-Mac-1, anti-Mac-2, and F4/80 for macrophages, anti-L3T4 for helper/inducer T cells, and anti-Lyt2 for cytotoxic/suppressor T cells revealed that the major population of infiltrating cells at the early stage of viral infection was Mac-2-positive macrophages. In contrast, macrophages, detected by anti-Mac-1 and F4/80 monoclonal antibodies were not found at the early stage of viral infection but were found at intermediate and late stages of viral infection. Helper/inducer T cells and cytotoxic/suppressor T cells also infiltrated the islets at intermediate and late stages of viral infection. Short-term treatment of mice with silica prior to viral infection resulted in an enhancement of beta-cell destruction, leading to the development of diabetes. In contrast, long-term treatment of mice with silica resulted in complete prevention of diabetes caused by a low dose of viral infection and a significant decrease in the incidence of diabetes caused by an intermediate or high dose of viral infection. Furthermore, depletion of macrophages, by a specific monoclonal antibody (anti-**Mac-2**) resulted in a much greater decrease in the incidence of **diabetes** caused by an intermediate dose of viral infection. However, suppression of helper/inducer T cells and cytotoxic/suppressor T cells, by anti-L3T4 and anti-Lyt2 antibodies, respectively, did not alter the incidence of diabetes. On the basis of these data, it is concluded that macrophages, particularly Mac-2-positive macrophages, play a crucial

role in the process of pancreatic beta-cell destruction at the early stage of encephalomyocarditis D virus infection in SJL/J mice.

L70 ANSWER 56 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: AAU97822 Protein DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Mouse cell membrane anchor protein galectin-3.
AN AAU97822 Protein DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence encodes a **galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 57 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: AAU97821 Protein DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Rat cell membrane anchor protein galectin-3.
AN AAU97821 Protein DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also

useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence encodes a **galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 58 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: AAU97820 Protein DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Human cell membrane anchor protein galectin-3 #5.
AN AAU97820 Protein DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence encodes a **galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 59 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: AAU97819 Protein DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Human cell membrane anchor protein galectin-3 #4.
AN AAU97819 Protein DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added,

and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence encodes a **galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 60 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: AAU97818 Protein DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Human cell membrane anchor protein galectin-3 #3.
AN AAU97818 Protein DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence encodes a **galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 61 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: AAU97817 Protein DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent

LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
CROSS REFERENCES: N-PSDB: ABK52349
DESCRIPTION: Human cell membrane anchor protein galectin-3 #2.
AN AAU97817 Protein DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence encodes a **galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 62 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: AAU97816 Protein DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N) UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
CROSS REFERENCES: N-PSDB: ABK52348
DESCRIPTION: Human cell membrane anchor protein galectin-3 #1.
AN AAU97816 Protein DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence encodes a **galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 63 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABK52364 DNA DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by

producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Galectin-3, antisense oilgonucleotide #6.
AN ABK52364 DNA DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence represents an antisense oligonucleotide to **Galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 64 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABK52363 DNA DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Galectin-3, antisense oilgonucleotide #5.
AN ABK52363 DNA DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g.

type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence represents an antisense oligonucleotide to **Galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 65 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABK52362 DNA DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Galectin-3, antisense oilgonucleotide #4.
AN ABK52362 DNA DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence represents an antisense oligonucleotide to **Galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 66 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABK52361 DNA DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Galectin-3, antisense oilgonucleotide #3.
AN ABK52361 DNA DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying

drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence represents an antisense oligonucleotide to **Galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 67 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABK52360 DNA DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Galectin-3, antisense oilgonucleotide #2.
AN ABK52360 DNA DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence represents an antisense oligonucleotide to **Galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 68 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABK52359 DNA DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English

OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Galectin-3, antisense oilgonucleotide #1.
AN ABK52359 DNA DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence represents an antisense oligonucleotide to **Galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 69 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABK52358 DNA DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
DESCRIPTION: Full length antisense polynucleotide for human galectin-3.
AN ABK52358 DNA DGENE
AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This sequence reprsents the full length antisense polynucleotide for the human cell-membrane anchor protein, **galectin-3**, that binds an isoform of Ras.

L70 ANSWER 70 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABK52349 DNA DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the

presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
CROSS REFERENCES: P-PSDB: AAU97817
DESCRIPTION: DNA encoding human cell membrane anchor protein galectin-3 #2.

AN ABK52349 DNA DGENE

AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This is the amino acid sequence of **galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 71 OF 72 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: ABK52348 DNA DGENE
TITLE: Identifying anchor proteins that bind Ras protein, by producing complexes of Ras and cell membrane proteins in the presence and absence of a Ras antagonist and identifying a complex disrupted by the Ras antagonist -
INVENTOR: Kloog Y; Haklai R; Paz A; El Ad-Sfadia G; Ballan E
PATENT ASSIGNEE: (UYRA-N)UNIV RAMOT APPLIED RES & IND DEV LTD.
PATENT INFO: WO 2002029031 A2 20020411 62p
APPLICATION INFO: WO 2001-IL918 20011001
PRIORITY INFO: US 2000-237858P 20001004
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2002-435333 [46]
CROSS REFERENCES: P-PSDB: AAU97816
DESCRIPTION: DNA encoding human cell membrane anchor protein galectin-3 #1.

AN ABK52348 DNA DGENE

AB The invention describes a method of identifying cell membrane anchor proteins that bind a Ras protein, involving preparing 2 reaction mixtures where one mixture has a Ras antagonist. A cross linking agent is added, and complexes between Ras protein and other proteins are produced. The complexes are then separated and the proteins binding to Ras are identified. The invention also describes a method useful for identifying drug candidates that inhibit aberrant Ras activity. An antisense compound comprising at least one phosphorothioate-modified nucleotide is useful for disrupting aberrant Ras activity in vivo, by infusing the antisense compound into a patient exhibiting this problem. The method is also useful for identifying anchor proteins for the farnesylated isoforms of H-Ras, K-Ras 4A, K-Ras 4B and N-Ras, whose mutated forms are known to be oncogenic. Reducing or inhibiting aberrant Ras activity in vivo is useful

for treating diseases characterised by uncontrolled mitosis, including cancers and various non-malignancies such as autoimmune disease (e.g. type 1 **diabetes**, lupus and multiple sclerosis), cirrhosis, graft rejection, atherosclerosis, polycystic kidneys and post-angioplasty restenosis. This is the amino acid sequence of **galectin-3**, a cell-membrane anchor protein that binds an isoform of Ras.

L70 ANSWER 72 OF 72 CONFSCI COPYRIGHT 2004 CSA on STN
ACCESSION NUMBER: 1999:2756 CONFSCI
DOCUMENT NUMBER: 99-015250
TITLE: Mutation scanning of the **galectin-3** gene (LGALS3) - A suggested candidate gene for insulin-dependent **diabetes** mellitus
AUTHOR: Larsen, Z.M.; Johannesen, J.; Kristiansen, O.P.; Nerup, J.; Pociot, F.
CORPORATE SOURCE: Steno Diabetes Cent., Gentofte, Denmark
SOURCE: American Society of Human Genetics, 9650 Rockville Pike, Bethesda, MD 20814, USA; phone: (301) 571-1825; email: subscriptionsournals.uchicago.edu, Abstracts available. Price $41.25. Poster Paper No. 1710.
Meeting Info.: 984 0002: 48th Annual Meeting of the American Society of Human Genetics (9840002). Denver, CO (USA). 27-31 Oct 1998. American Society of Human Genetics.
DOCUMENT TYPE: Conference
FILE SEGMENT: DCCP
LANGUAGE: English

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